DOCUMENT RESUME

ED 283 254 EA 019 473

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TITLE Educational Administration and the Management of Knowledge.
INSTITUTION Deakin Univ., Victoria (Australia).
REPORT NO ISBN-0-7300-0012-5
PUB DATE 83
NOTE 138p.; Prepared as course material for "Theory and Practice in Educational Administration" (Course ESA-841).
AVAILABLE FROM Publication Sales, Deakin University Press, Victoria 3217, Australia ($12.50 Australian; quantity discounts).
PUB TYPE Viewpoints (120) -- Reports - Evaluative/Feasibility (142) -- Books (010)

EDRS PRICE MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS *Administrative Principles; Bureaucracy; Cultural Influences; *Educational Administration; Educational Theories; Elementary Secondary Education; Epistemology; Foreign Countries; Open Education; Politics of Education; *Role of Education; Social Problems; Sociology

ABSTRACT

Traditionally, educational administration is a technology of administrative control that systematically ignores both educational issues and those social and cultural issues that lie at the heart of people's commitment to, or alienation from, educational institutions. These social and cultural inequalities are investigated in a series of essays on educational administration that analyze the consequences of the imposition of an administration conceived as a technology of control. A discussion of alternatives is presented, followed by a brief account of a more adequate model based on contemporary sociology and philosophy of science. Finally, an argument is presented concerning the development of an educational theory of administration that serves the purposes of liberation and justice rather than control and inequity. Sixty-seven references are provided. The following readings complete the monograph: (1) "Educational Administration, the Sociology of Science, and the Management of Knowledge" (R. J. Bates); (2) "Open Schools--Open Society?" (B. Bernstein); (3) "School Knowledge and the Structure of Bureaucracy" (A. Wake); (4) "Knowledge Utilization: Epistemological and Political Assumptions" (D. H. Kerr); and (5) "Scientific Management and Critical Theory in Educational Administration" (P. E. Watkins). Each reading includes references and appropriate tables. An annotated bibliography of key works is provided to guide further reading. (WTH)

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ESA841 THEORY AND PRACTICE IN EDUCATIONAL ADMINISTRATION

Educational Administration and the Management of Knowledge

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Richard Bates

ESA841 Theory and practice in educational administration

Educational administration and the management of knowledge

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Deakin University

Deakin University
Victoria 3217
1983

Published by Deakin University, Victoria, Australia 3217
Distributed by Deakin University Press

First published 1983

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Reprinted 1985

Edited and designed by Deakin
University Production Unit
Printed by Deakin University Printery

National Library of Australia
Cataloguing in publication data

Bates, Richard J., 1941—
Educational administration and the management of knowledge

At head of title: Theory and practice in educational administration.
Bibliography.
ESA 841.
ISBN 0 7300 0012 5.
ISBN 0 7300 0000 1 (ESA 841).

1. School management and organization. 2. Educational planning. I. Deakin University. II. Title. III. Title: Theory and practice in educational administration.

371.2'001

This book forms part of the **Theory and practice in educational administration** course offered by the School of Education in Deakin University's Open Campus Program. The book has been prepared in collaboration with the **Theory and practice in educational administration** course team, whose members are:

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The course includes:
Change and Stability in Schooling
Class, Control, and Contestation in Educational Organisations
Critical Theory and Educational Practice
Educational Administration and the Management of Knowledge
Loose Coupling Revisited: A Critical View of Weick's Contribution to Educational Administration
Philosophy, Common Sense, and Action in Educational Administration
Political Legitimacy and the Administration of Education
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Series Introduction

It is now widely recognised, among theorists and practitioners alike, that the traditions that have informed educational administration as a field of study for several decades are of only limited use in coming to terms with the complexity and value-laden nature of educational practice. The sudden politicisation of the context and conduct of education has raised issues of immediate import that cannot be dealt with adequately by functionalist analysis or behavioural science. The collapse of these theoretical traditions in educational administration has produced a vacuum into which a very haphazard collection of intellectual bric-a-brac has been sucked. As a result, both theorists and the practitioners who look to them for help in an increasingly disordered world are alike in their bewilderment. How can alternative formulations be developed? How can reliable and relevant analyses be made?

The series of books of which this volume is a part is an attempt to explore a variety of intellectual traditions that have, until now, been largely ignored or dismissed by educational administrators. Each of the books is an attempt to bring a particular intellectual perspective to bear on the practical problems of administering education. They are, therefore, diverse in their starting points and in their analysis. What they have in common, however, is a rejection of a purely technical, functionalist approach to educational administration, and a commitment to a critical and reflexive consideration of educational practice.

The ideas presented in the introductory essays are necessarily an encapsulation of arguments that have developed and are developing more fully elsewhere. In order to assist readers to participate in these developments, selected readings are attached to each paper, and an annotated bibliography of key works is provided. We hope that the publication of this series will encourage others to join a necessary exploration of alternative perspectives in educational administration. Such exploration is long overdue.

Course team chairman

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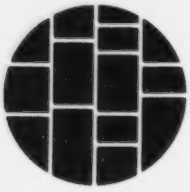

Educational administration as a technology of control

The separation of administrative and educational concerns

Educational administration is a technology of control. The preoccupations of administrators, at least as they are represented in textbooks and training programs, are with, for example, management, organisation, authority, motivation, job satisfaction, leadership, decision making, implementation, communication, co-ordination, supervision, evaluation, efficiency, effectiveness, accountability, and power (see Hoy and Miskel 1982, as a typical example). The theoretical frameworks within which such preoccupations are located have equally revealing names: axiomatic theory, general system theory, bureaucracy theory, compliance theory, contingency theory, social system theory, motivation-hygiene theory, expectancy theory (see Silver 1983). The technology associated with such conceptualisations of management and control is represented through such organising systems as Planning, Programming and Budgeting Systems (PPBS); Program Evaluation and Review Technique (PERT); Management Information Systems (MIS); Management by Objectives (MBO); operations research, productivity research, systems research; and simulations studies (see Wise 1979). The concepts, the theories, and the organising systems are a clear indication of a preoccupation with control that is endemic to the occupation. As Wolcott remarks of the administrators he studied, 'the essence of being a good technocrat is to exert control' (Wolcott 1977, p. 159).

If the preoccupation of administrators (as well as of administrative theoreticians) is the exercising of control, then one might reasonably ask, control over what or, more likely, over whom? The answer, according to Hoy and Miskel, is simple and uncontroversial:

> When teachers join a school organization, they accept the formal authority relation. They agree within certain limits to follow directives that administrators issue. In short, they enter into contractual agreements in which they sell their promises to obey commands (Hoy and Miskel 1982, p. 124).

In case this should be thought too stark a definition of the situation, they go on to argue, following Barnard (1938), that formal authority is insufficient to ensure control, thus 'only when the authority of leadership is combined with the authority of position will superiors be effective in inducing subordinates to comply with directives' (Hoy and Miskel 1982, p. 125). Administrators must therefore tap that

> informal authority [that] arises from the loyalty that the superior commands from group members. The significance of subordinate loyalty to superiors seems clear. Administrators who command subordinate loyalty seem to have a distinct advantage in enlarging their authority base (Hoy and Miskel 1982, p. 125).

The picture seems quite clear. Organisations (and, by extension, educational organisations such as schools) are systems of hierarchically ordered positions in which administrators exercise control through a combination of their formal positional authority and their personal re-

lations in order to enlarge their authority base. The first principle of administrative life, according to Hoy and Miskel, appears to be that the primary task of administrators is to increase their control over subordinates.

A quick look at the focus of their discussion of principals, teachers, and students supports such a conclusion. Principals are preoccupied with authority, decision making, leadership, and teacher relations; teachers, with job incentives, job satisfaction, work motivation, loyalty to principals, and principal relations. Students are discussed under the headings of alienation, performance, and control. The *Weltanschauung* of administration is complete; the ideology of dominance and submission is clear.

The purpose of all this hierarchy and control is, however, singularly obscure. Despite the apparent intention of typical texts such as Hoy and Miskel (1982) and Silver (1983) to outline a theory of *educational* administration (the word educational does, after all, figure prominently in the titles) neither book addresses a single *educational* idea. One can search both index and text for discussions of such central educational concepts as classroom, curriculum, evaluation, examination, instruction, knowledge, learning, pedagogy, subject-matter, teaching, or testing without success. Not one is listed. Not one is discussed. The separation of administrative theory from educational concerns is as complete as it is unacknowledged.

The historical roots of the administrative settlement

The historical roots of this separation lie in a conception of educational administration that followed the conjunction of three social movements during the decades spanning the turn of the twentieth century: the municipal reform movement; occupational professionalisation; and the cult of efficiency. Although this conception was an American development, it profoundly influenced the development of educational administration elsewhere.

The **municipal reform movement** was essentially an attempt to consolidate the power of business and industrial élites in the governance of public affairs. It depended on the amalgamation of small public enterprises (such as schools and small school districts) into large, hierarchically ordered, and centrally directed corporate systems. As Burnham (1965) has suggested:

> By the decade of the 1920's this new regime and business control over public policy . . . were consolidated . . . The functional result . . . was the conversion of a fairly democratic regime into a rather broadly based oligarchy (Burnham 1965, p. 23)

As Tyack and Hansot observe of the impact of the municipal reform movement in education, the administrative changes that were involved

> often blocked the political channels by which the cities' working-class and ethnic communities had traditionally expressed their political interests in education. In the process they also enhanced the power of cosmopolitan elites (Tyack and Hansot 1982, p. 107).

This was, of course, the whole point of the movement, for 'rational' systems of corporate management and control could only be implemented if minority political interests could be excluded from the processes of decision making:

> The goal of such structural changes in urban school governance was to turn controversial political issues — formerly decided by large numbers of elected representatives on ward and central committees — into matters for administrative discretion to be decided by experts claiming objectivity. This was, of course, not depoliticization at all; it was another form of politics, one in which authority rested not on representativeness or participation but on expertise (Tyack and Hansot 1982, p. 107–8).

The need of such corporate structures both for expertise and for middle-level managers whose corporate loyalty was dependable and whose expertise could be sanctified through certification by institutes of higher learning was coincidental with the emergence of male-dominated professional associations in education, as elsewhere. The rise of professionalism based upon the development of occupational hierarchies was the second critically important social movement.

Occupational professionalisation was central to the development of a technology of control. As Callahan (1962), Bledstein (1976), and Larson (1977) have shown, the rise of educational administration as a profession was based upon both the separation of conception from execution in the world of work (see Braverman 1974) and the separation within the occupation of upwardly mobile rural male administrators from classroom teachers (the overwhelming majority of whom were female). The separation of the 'profession' of educational administration from the occupation of teaching was achieved through a variety of institutional structures including the newly established professional associations, newly initiated university programs, newly developed foundation support, and a newly established network of influentials who exploited the resources of associations, universities, foundations, and school districts to further the aims and influence of what came to be known as 'the educational trust' (Tyack and Hansot 1982, p. 109).

The educational trust was founded upon, supported by, and ultimately shaped through, the vision and the rhetoric of business:

> From 1890 to 1930, no other lay group had as much impact on public education as did businessmen . . . Businessmen were active in the political movement to abolish ward school boards and to refashion urban systems on the corporate model; they and their wives pushed hard for such reforms as vocational schooling and the kindergarten; they served — together with professional people — disproportionately on city school boards; they lavishly supported educational research and educational campaigns . . . and their language, techniques and ideology permeated the new 'science' of educational management (Tyack and Hansot 1982, p. 110).

The new science of educational management was legitimated by the third social movement — that is, by the ideological commitment to the application of science and technology to social affairs. The whole point of the effort to develop efficient structures of corporate management on the one hand, and the professional expertise of the educational trust on the other, was to combine them into a 'scientifically-based' process of human engineering that would realise a particular vision of the social order:

> Believing that the basic structure of society was just and progressive, the new leaders thought they knew how to bring about a smoothly running, socially efficient, stable social order in which education was a major form of social engineering. Society would control its own evolution through schooling; professional management would replace politics; science would replace religion and custom as sources of authority; and experts would adapt education to the transformed conditions of modern corporate life . . . The experts would run everything to everyone's benefit (Tyack and Hansot 1982, p. 107).

The **cult of efficiency**, which eventuated from the combination of these social movements, was, as Dewey predicted and Callahan (1962) has documented, to have disastrous effects on education. Dewey warned as early as 1902 that 'it is easy to fall into the habit of regarding the mechanics of school organization and administration as something comparatively external and indifferent to educational ideals' (1902, pp. 22–3). But the separation of technology from ideology was precisely what the social efficiency movement was designed to produce.

The municipal reform movement was largely successful in replacing local political structures, through which working-class and ethnic minorities pursued their interests in educational issues, with centralised corporate management structures, dominated by the cosmopolitan élites of the educational trust. Moreover, the educational trust was largly composed of social engineers who, although they

> were quite clear about their assessment of social and educational needs, . . . were less clear about the philosophical premises of their values or the political process by which priorities should be set. Somehow the assemblage of facts would speak for itself. Their faith in science as objective measurement, coupled with their contempt for earlier 'armchair theorizing' about educational purposes as mere opinion, tended to simplify or even eliminate issues of ethical choice for them (Tyack and Hansot 1982, p. 156).

The effect was to replace democracy with oligarchy and the consideration of educational interests and ideals with debate over the efficiency and effectiveness of a technology of control.

As Callahan (1962) has shown, the effects on education were frequently unsatisfactory, for the rhetoric of business efficiency in education was powerless to confront three major problems. Firstly, even were the school to be treated as a factory, the output was all but impossible to measure. Secondly, universal agreement over the goals of schooling was impossible to achieve. Thirdly, the connections between input, process, and output were decidedly ambiguous. These problems, as Dewey (1899) suggested, arose from the nature of education as a social and cultural activity in which means and ends were closely related. Democratic ends could not be achieved by technical means. A democratic education system could not be achieved if planning were separated from execution, if management were divorced from practice. But the administrative progressives of the educational trust were unreflective about such issues. 'They wanted to use research for reform in education and society within a framework of privilege and values they rarely questioned' (Tyack and Hansot 1982, p. 156).

The integration of these three social movements — the municipal reform movement, the occupational professionalisation of the educational trust, and the legitimating rhetoric of the cult of efficiency — formed the basis for a political settlement that has dominated educational administration in the United States of America for nearly a century.

Contemporary advocates of the technical tradition

The resurgence of interest in social engineering following the Second World War brought about a renewed interest in the educational application of 'scientific' theories of a social and behavioural kind (see Cunningham, Hack and Nystrand 1977). But these views of educational administration, whether in their post-war form or in their more contemporary representation by authors such as Hoy and Miskel (1982) or Silver (1983), are remarkable not for their reintegration of educational and administrative discourse, but for their continued pursuit of the ideals of a century-old tradition — a tradition that attempts to mute political debate over educational interests and ideals among local interest groups and to substitute the institutionalisation of a technology of educational production and control serving the interests of cosmopolitan and professionalised élites.

Silver, for instance, endorses the technical/professional approach as follows:

> What is needed to advance the field of educational administration to the status of a mature applied profession is the systematic use of theories to generate knowledge about the improvement of practice . . . The use of clear-cut, quantifiable, and socially endorsed criteria by which to judge administrative success (student outcomes in relation to stated goals) would enable the research community to determine systematically whether the practical implications of theories do in fact help to improve practice . . . for the absence of demonstrably useful technical knowledge about how to enhance students' learning is one of the most serious shortcomings of the profession of educational administration (Silver 1983, pp. xiv–xv).

Elements of a radical critique

There are numerous problems associated with this technical/professional aproach to educational administration. Two in particular are of fundamental importance. Firstly, the model of science to which the tradition appeals for a justification of its activities is a serious misrepresentation of the methodology of science and the growth of knowledge. Secondly, the model of humanity, politics, and society contained in this administrative tradition is fundamentally opposed to the principles of equality, liberty, and democracy.

The **consensus model of science** employed by the inheritors of the efficiency movement is essential to the attempt to deny ethical, political, and aesthetic controversy by treating such debates as technical problems to be solved by cosmopolitan élites through the mechanisms of social engineering.

As Michael Apple suggests:

> Most advanced corporate societies seem to transform their ethical,

> political, and aesthetic questions, for instance, into engineering problems. Profound conflict between opposing ideological and moral positions is translated into puzzles to be solved by the technical expertise that is maximized by the cultural apparatus . . . When questioned about the tendency to eliminate conflict, or redefine it, and search for consensus, proponents of systems management procedures in education . . . take the position that they are merely trying to be scientific about their problems. This is where a basic difficulty lies. The perspective they have of science is notably inaccurate . . . (Apple 1979, p. 119).

As I have suggested elsewhere (Bates 1980, 1982a) the model of science held by the traditional mainstream theorists in educational administration is

> an inadequate and misleading, even ideological, representation of the process of science — which is, rather, a process of negotiation between competing claims influenced in its assumptions by social and political factors and subjected to constant amendment and change (Bates 1980, p. 6).

Apple puts the point more strongly:

> The history of science and the growth of individual disciplines, has *not* proceeded by consensus. In fact, most important progress in these fields has been occasioned by intense conflict, both intellectual and interpersonal, and by conceptual revolution (Apple 1979, p. 119).

The misrepresentation of science contained in the traditions of the cult of efficiency is paralleled by the misrepresentation, or subordination, of the political values of liberty, equality, and democracy.

A **conception of the just society** is central to the critique. As Strike (1982) suggests with regard to the behaviourist program that lies at the core of social efficiency and engineering in education, what is objectionable about such ideas is

> the assumption that the student is completely passive. Education is conceptualized on a production model. Learning is the product, teaching is the production process, the child is the raw material. Learning is something done to the child whose own values are not important and whose cooperation is not required . . . A child's resistance to being taught is understood as a defect in raw materials. It is something to be remedied. It receives none of the consideration that the wants or interests of free agents ought to receive. [In this view] educational rights involve the right to be educated whether one likes it or not (Strike 1982, pp. 81–2).

However, the problem, as a number of critics have pointed out, is that such a process–product conceptualisation of education is quite functional for a society that assumes that a large proportion of workers will have to engage in work in bureaucratised settings and be subject to managerial systems of control based upon the separation of conception from execution and the use of coercive economic controls. As Apple suggests:

> By learning how to work for others' preordained goals using others' preselected behaviors, students also learn to function in an increasingly corporate and bureaucratized society in which the adult roles

> one is to play are already sedimented into the social fabric. Each role has its own brand of thinking *already* built into it, and students will feel comfortable playing these often relatively alienating roles only in so far as they have been taught that this is the proper mode of existing (Apple 1979, p. 118).

The potential of such a system of education to erode conceptions of liberty and democracy is considerable, as Strike points out:

> A variety of civil rights and liberties depends on thinking of persons as free, active, responsible agents, and it will not long survive the intellectual habit of conceptualizing human behavior in a passive language. Indeed . . . the very idea of people having equal rights is linked to what it means to be a person. If this is correct, the capacity for evil in a view that erodes that concept is great (Strike 1982, pp. 82–3).

The erosion of the ideals of liberty and equality that are fundamental to the pursuit of democracy is at the heart of the critique of education mounted by both liberals and radicals during the past two decades. For them the passivity encouraged by mass education is fundamental to the continuance of inequality.

It is now a commonplace among both liberals and radicals that education systems tend to reproduce, rather than ameliorate, social inequalities. As Papagiannis, Klees and Bickel point out:

> There is substantial empirical evidence supporting the liberal view that meritocratic allocation of social rewards is far from reality in both the developed and developing world. For example, blacks and females get lower rewards even after controlling for the influence of 'relevant' characteristics . . . The same is true with respect to the socioeconomic class background of an individual . . . Success in educational systems reflects this same race, sex, and class bias . . . and even educational reforms targeted at the 'disadvantaged' often help the advantaged most . . . (Papagiannis, Klees and Bickel 1982, p. 252).

While liberals have, for the most part, attempted to revise educational provision and selection to equalise opportunity in the name of fairness, radical critics have suggested that far more fundamental issues are at stake. In their view, education systems, far from being agencies promoting equality of opportunity, are in fact directed to maintaining inequalities. Thus the 'real goal of education is not the "maximisation" of everyone's potential, but only the potential of the few — the élite, or ruling class' (Carnoy 1972, p. 2).

The questions raised by the radical critics come to focus on the function of education systems in supporting and promoting inequalities of power and control through their management of the production and distribution of knowledge. Not just educational administration, but education systems are seen as employing technologies of social control directed towards reproducing social inequalities in the interests of élites. The central problem of this radical critique is that of 'enquiry into the social organization of knowledge in educational institutions . . . which makes the problems of control and the organization of knowledge and their interrelations its core concern' (Young 1971, p. 3).

The radical critique, and especially the new sociology of education, was to reject the taken-for-granted assumption that education was something best left to the control of experts, and to make the questions of control and of competing interests central to its investigations. If, as I argued earlier, the purposes of educational administration as a technology of control were obscure and taken for granted even by its most vocal advocates, the new sociologists of education were to make such purposes the central focus of their inquiry into the management of knowledge through education and the role of education in reproducing social inequalities.

Education and the reproduction of inequalities

In 1971, Michael Young edited a volume of readings called *Knowledge and Control*. In his contributions to that volume, Young argued that the traditional preoccupations of sociologists of education with the input and output of education systems had led them to take for granted the ways in which such systems select, organise, and structure knowledge and make it available in a systematically discriminatory fashion. Both British and American sociology of education, it was argued, had been dominated by

> functionalist theory, which . . . presupposes at a very general level an agreed set of societal values or goals which define both the selection and organization of knowledge in curricula. With one or two notable exceptions . . . work in the sociology of education has been concerned with the 'organization' or 'processing' of people . . . and takes the organization of knowledge for granted (Young 1971, p. 26).

Thus the sociology of education, as well as theories of educational administration, had largely separated organisational from educational issues. Like administrators,

> sociologists seem to have forgotten . . . that education is not a product like cars and bread, but a selection and organization from the available knowledge at a particular time which involves conscious or unconscious choices (Young 1971, p. 24).

The redress of such social amnesia was to be a major preoccupation for Young and his collaborators, one which asserted that:

> [It] should be the central task of the sociology of education to relate these principles of selection and organization that underly curricula to their institutional and interactional setting in schools and classrooms and to the wider social structure (Young 1971, p. 24).

This conviction was stated even more strongly by Basil Bernstein:

> How a society selects, classifies, distributes, transmits and evaluates the educational knowledge it considers public, reflects both the distribution of power and the principles of social control. From this point of view, differences within and changes in the organization, transmission and evaluation of educational knowledge should be a major area of sociological interest (Bernstein 1971, p. 47)

What might be called the management of knowledge became, therefore, a central focus for the work of the new sociologists of education.

Their work, however, was not directed solely at the role of external agencies in the shaping of educational knowledge. It was also concerned

with the ways in which particular forms of the organisation, transmission, and evaluation of knowledge in education systems were important in shaping and maintaining patterns of cultural, social, and economic transmissions in the wider society, especially those involved with the reproduction of inequalities. 'Such a study', argued Bernstein, 'is a part of the larger question of the structure and changes in the structure of cultural transmission' (1971, p. 47).

Since the publication of *Knowledge and Control* (Young 1971), questions of the selection, organisation, transmission, and evaluation of knowledge in school systems, and of the determination of curricular structures and the part they play in the reproduction of particular cultural systems, have been taken up with enthusiasm by sociologists in several parts of the world. Three theories in this tradition seem especially important: those of Bourdieu, Bernstein, and Bowles and Gintis.

Pierre Bourdieu: symbolic violence and cultural reproduction

Pierre Bourdieu and his colleagues at the Centre de Sociologie Européenne in Paris have played a major role in developing a theory of cultural reproduction that argues that the class divisions of modern societies are largely maintained and legitimated through the exercise of symbolic violence. Such symbolic systems operate through the distribution and exchange of cultural capital in much the same way as economic systems serve to distribute and exchange economic capital. Within both spheres, the market is the site of conflict between dominant and subordinate classes. However, in the cultural market or, as Bourdieu calls it, the intellectual field, the struggle is over how reality should be symbolically defined. Thus these symbolic struggles are constituted

> directly in the symbolic conflicts of everyday life or indirectly through the struggle waged by specialists in symbolic production . . . in which the (object at) stake is the monopoly of legitimate symbolic violence — that is to say, the power to impose . . . instruments of knowledge and expression of social reality (Bourdieu 1977, p. 115).

The education system is a major instrument in the struggle over the production and imposition of symbols that fulfil the political function of maintaining class dominance. The education system, Bourdieu suggests, takes the culture of the dominant cultural group and instantiates it as the legitimate selection and organisation of knowledge against which all other symbolic systems are to be evaluated. Needless to say, the selection and organisation of knowledge by subordinate cultural groups is inevitably evaluated as inferior, inadequate, or irrelevant. But, says Bourdieu, while the relative autonomy of the education system *appears* to guarantee the independence, impartiality, and therefore legitimacy of this form of cultural domination, the symbolic violence involved in *fact* systematically misrepresents the nature of class relationships by making them appear natural, inevitable, and just. The final deception of such a system is that it

> confers on the privileged the supreme privilege of not seeing themselves as privileged [thus managing] the more easily to convince the

> disinherited that they owe their scholastic and social destiny to their lack of gifts or merits, because in matters of culture absolute dispossession excludes awareness of being dispossessed (Bourdieu and Passeron 1977, p. 210).

Bourdieu's thesis, therefore, is that the management of knowledge in education systems is structured in ways that allow the transformation of economic and political power into symbolic power via the education system. The particular selection, organisation, transmission, and evaluation of knowledge presented by the education system serves to reinforce the position of dominant cultural groups, while presenting such dominance as inevitable and just. At the same time, the education system acts to convince the dispossessed that their dispossession is the result, not of symbolic violence, but of their lack of gifts or talent.

However, what Bourdieu has so far failed to provide, as Rachel Sharp points out, are 'any concepts for analyzing the crucial issue, which is what determines which external influences manage to penetrate within [education's] boundaries and which do not' (Sharp 1980, p. 75). In this respect, our earlier analysis of the specific conjunction of three major social movements in the transformation of American education and the subordination of working-class and ethnic minorities to the interests of the cosmopolitan élites provides a relevant case study of the penetration of educational boundaries. A closer analysis might also allow the development of appropriate analytic concepts.

Basil Bernstein: class, codes, and control

While Bourdieu's theory of cultural reproduction through symbolic violence gives an outline of the historical and social conditions under which education systems have achieved a relative autonomy from other institutionalised forms of economic and social dominance, Bernstein has been concentrating on the institutional mechanisms through which principles of social order are transmitted and transformed. This is not to say that Bernstein discounts the importance of symbolic control, indeed quite the opposite is the case:

> It is clear that in advanced industrial societies, especially in the West, there has been a considerable increase in the division of labour of social control based upon specialized modes of communication (symbolic control). This has created a vast range of occupations dedicated to the symbolic shaping and re-shaping of the population (Bernstein 1975, p. 18).

Fundamental to this alteration in the division of labour is the move from mechanical to organic solidarity that was noted by Durkheim — that is, the shift from a simple segmented society towards a complex interdependent division of labour. Bernstein, however, takes Durkheim's analysis of the changed *structure* of relationships and develops an analysis of a concomitant change in social *function* which is 'to shift the relationships between visible and invisible forms of control' (Bernstein 1975, p. 18).

The shifts from mechanical to organic solidarity and from visible to invisible forms of social control form the basic problem of Bernstein's agenda. This problem is located within an analysis of class relations. Thus

Bernstein's early work on restricted and elaborated language codes was concerned with two major issues:

1 How class regulates the structure of communication within the family and so the initial sociolinguistic coding orientation of the children.

2 How class regulates the institutionalizing of elaborated codes in education, the forms of their transmission and therefore the forms of their realization (Bernstein 1975, p. 22).

These preoccupations were based upon the conviction that:

> Class acts fundamentally on the division of labour by structuring its moral basis; that is, by creating the underlying relationships of production, distribution and consumption. Class relationships regulate the transmission, participation in and the possibility of changing the dominant cultural categories (Bernstein 1975, p. 23).

Thus, both morally and structurally, 'class is a fundamental category of exclusion [that] is reproduced in various ways in schools, through the social context and forms of transmission of education' (Bernstein 1975, p. 28). As there is 'no class society which *deliberately* and *rationally* attempts to ensure that all social groups can participate equally in the creation, production and distribution of what are considered as value, goods and services' (Bernstein 1975, p. 27), it follows that the study of education is largely the study of the division of labour on a class basis through the management of knowledge.

The mechanisms of such management of knowledge in schools are seen by Bernstein as encapsulated in particular structured message systems:

> Formal educational knowledge can be considered to be realized through three message systems: curriculum, pedagogy and evaluation. Curriculum defines what counts as valid knowledge, pedagogy defines what counts as a valid transmission of knowledge, and evaluation defines what counts as a valid realization of this knowledge on the part of the taught (Bernstein 1975, p. 85).

Bernstein argues that the examination of these three message systems and the examination of the relationships between modes of social integration and symbolic structures is best achieved 'through the study of the process of their reproduction and change' (Bernstein 1975, pp. 19–20). Bernstein's studies of the message systems of schools (curriculum, pedagogy, and evaluation) are based upon the utilisation of two fundamental concepts: classification and frame.

Classification refers essentially to the nature of the differentiation between contents, that is, between different categories of educational knowledge. Thus:

> Where classification is strong, contents are well insulated from each other by strong boundaries. Where classification is weak, there is reduced insulation between contents, for the boundaries between contents are weak or blurred. *Classification thus refers to the degree of boundary maintenance between contents.* Classification focuses our attention upon boundary strength as the critical distinguishing feature of the division of labour of educational knowledge. It gives us . . . the basic structure of the message system, curriculum (Bernstein 1975, p. 88).

Thus the study of **curriculum** becomes, for Bernstein, the study of changes in the classification of contents: that is, the shift from the strong boundary systems of traditional collection codes to the weak boundary systems of contemporary integrated codes. The sociology of the curriculum is, then, focused on the ways in which such alterations in the classification of educational codes relate to concomitant changes in the division of labour in the wider society — the moral basis of class. Thus:

> The movement away from collection to integrated codes symbolizes that there is a crisis in society's basic classifications and frames, and therefore a crisis in its structures of power and principles of control. The movement from this point of view represents an attempt to declassify and so alter power structures and principles of control; in so doing to unfreeze the structuring of knowledge and to change the boundaries of consciousness. From this point of view integrated codes are symptoms of a moral crisis . . . (Bernstein 1975, p. 11).

If the concept of classification refers specifically to the curricular message system, then the concept of **frame** is used to determine the structure of the message system — **pedagogy**.

> Frame refers to the form of the *context* in which knowledge is transmitted and received. Frame refers to the specific pedagogical relationship of teacher and taught . . . *Frame refers to the degree of control teacher and pupil possess over the selection, organization, pacing and timing of the knowledge transmitted and received in the pedagogical relationship* (Bernstein 1975, pp. 88–9).

As the study of the classification of curricula is best approached through the change from collection to integrated codes, so the study of the framing of pedagogy is best approached, Bernstein suggests, through changes from visible to invisible modes of control.

Bernstein's thesis here is that visible pedagogy, in which the relations between teacher and taught and the nature of the selection, organisation, pacing, and timing of knowledge are explicit, serves the interests of the reproduction of the existing social order of the wider society. In particular, visible pedagogy, like the strong classification of collection-type curricula, serves to maintain social and symbolic order and thus the interests of the old (i.e. established) middle class. The new middle class — those who are aiming at upward social mobility — is, however, best served by invisible pedagogies and by integrated codes that blur established distinctions and allow the interruption of established social, symbolic, and educational controls.

The problem for the new middle class lies in the contradiction between their commitment to the mechanisms that have allowed their interruption of the patterns of the old middle class (i.e. their upward mobility) and their need to maintain their newly won position in the middle class through their assimilation into established categories (classification and frame) that assure them of a continued (privileged) place in the division of labour. Thus:

> The new middle class, like the proponents of the invisible pedagogy, are caught in a contradiction; for their theories are at variance with their objective class relationship. A deep-rooted ambivalence is the ambience of this group. On the one hand, they stand for variety against

> inflexibility, expression against repression, the inter-personal against the inter-positional; on the other hand, there is the grim obduracy of the division of labour and of the narrow pathways to its positions of power and prestige . . . Thus, if the new middle class is to repeat its position in the class structure, then appropriate secondary socialization into privileged education becomes crucial (Bernstein 1975, p. 123).

Thus, in this analysis, changes in pedagogy are related to changes in class locations in the division of labour.

Bernstein's analysis of the message system of **evaluation** is less well developed than his analysis of curriculum and pedagogy. However, he has sketched out the questions that such an analysis should address. In the first instance, strong classification and visible pedagogy involve an explicit, or objective, set of criteria for evaluation that allows for the direct comparison of successes and failures. Thus:

> Where the pedagogy is visible, an 'objective' grid exists for the evaluation of pupils in the form of (*a*) clear criteria and (*b*) a delicate measurement procedure. The child receives a grade or its equivalent for any valued performance. Further, where the pedagogy is visible, it is likely to be standardized and so schools are directly comparable as to their successes and failures. The profile of the pupil may be found by looking across his grades. The pupil knows where he is, the teacher knows where he is, and so do the parents (Bernstein 1975, p. 130).

On the other hand, in the case of integrated curricula, weak frames and

> invisible pedagogies, no such grid exists. The evaluation procedures are multiple, diffuse and not easily subject to apparently precise measurement. This makes comparison between pupils complex, and also comparisons between schools (Bernstein 1975, p. 130).

The shift towards integrated curricula, invisible pedagogies, and diffuse evaluation may well be justified in terms of a shift towards organic principles of social organisation. But, if the division of labour in the wider society remains fixed on the principles of mechanical solidarity, then a fundamental tension will exist between the institutions of education and work:

> Yet the crucial integration is precisely between the principles of education and the principles of work. There can be no such integration in Western societies . . . because work epitomizes class relationships . . . Indeed, the abstracting of education from work, the hallmark of the liberal tradition, or the linkage of education to leisure, masks the brutal fact that work and education cannot be integrated at the level of social principles in class societies (Bernstein 1975, p. 135).

The social principles of a class society represented by the division of labour are, therefore, superimposed on the social principles of liberal education through the mechanisms of examination. Therefore, argues Bernstein:

> Inasmuch as the school is a major instrument of the division of labour through its control over the occupational fate of its pupils, it has taken on a pronounced bureaucratic function. Here it subordinates pupils' needs to the requirements of the division of labour through the examination system. The teacher-pupil relation, where the pupils are

> selected as potential examinees, often becomes almost one of contract with limited commitment on each side. Knowledge is rationally organized by the teacher and transmitted in terms of it examination efficiency. Control over such pupils stems from control over their occupational or higher educational fate. Such control is bureaucratic. The instrumental order of the school is likely to be transmitted through bureaucratic procedures which affect curriculum, the transmission of knowledge and the quality of the pupil-teacher relation (Bernstein 1975, p. 63).

Thus the bureaucratisation of the school can be seen as a direct response to the extant division of labour in class societies.

Bernstein has argued that during the 1950s and 1960s a moral crisis developed in the classifications and frames and the division of labour in Western societies. That is, the traditional division of labour was altered by the emergence of a new middle class concerned not with the production of goods but rather with the production of services. Most important in this shift was the move away from material production towards the production of cultural and symbolic communication. Bernstein also argues that this shift in the division of labour allowed a shift in the principles governing the social organisation of schooling. Thus as society moved from a closed to an open (or a mechanical to an organic) structure, so did schools, with consequent alterations in the fundamental message systems through which the activities of pupils and teachers are organised.

At this macro-level of analysis there is some controversy surrounding Bernstein's argument (see Sharp 1980). However, while it may be argued that the trend towards more open principles of social order evident in the 1960s has been reversed in the 1980s, such comment on particular social and historical conditions does not invalidate Bernstein's contribution to the analysis of schooling. Indeed, he has provided elements of an analysis that allows the detailed examination of the ways in which the fundamental message systems of schools are shaped by the principles of social control embedded in the wider division of labour of class societies. Indeed it is not too difficult to see that his analysis of the codes (classification and framing) underlying particular school practices can be related to the principles of social organisation mediated through particular administrative structures.

For instance, the impact of the business community on education, through the municipal reform movement, the process of occupational professionalisation, and the ideology of the cult of efficiency, was clearly related to a widespread alteration in the principles of social control (the shift from democratic to oligarchical control) a moral transformation associated with changes in the division of labour (the separation of bureaucratised professional élites from lower status occupations), and in the symbolic system of control (the shift towards 'scientific' principles of justification). The result for schools was, as Callahan (1962) shows, a series of major transformations in the selection, classification, transmission, and evaluation of public educational knowledge.

If Bernstein is correct, such transformations are likely to have tightened the relationship between education and the hierarchical division of labour. That is, they are likely to have brought about a closer parallel between the structure and function of the education system and the class structure

of the wider society. But it has been a major claim of the sustaining rhetoric of mass education in the twentieth century that the equalisation of educational opportunity was the means of *loosening* this relationship and of increasing the equalisation of economic and social opportunity in an admittedly unequal society. As Samuel Bowles puts it:

> The ideological defense of modern capitalist society rests heavily on the assertion that the equalizing effects of education can counter the disequalizing forces inherent in the free market system. That educational systems in capitalist societies have been highly unequal is generally admitted and widely condemned. Yet educational inequalities are taken as passing phenomena, holdovers from an earlier, less enlightened era, which are rapidly being eliminated (Bowles 1971, p. 137).

Such a belief has been widespread. Bressler, in his assessment of the conventional wisdom of education in the United States of America in the 1960s, suggested that its primary feature was the idea that:

> Social change can be controlled by the application of disciplined intelligence . . . the educational process is the only alternative to social stagnation or revolutionary violence. It is the duty of education to preside over gradualistic change toward a more perfect expression of the democratic tradition (Bressler 1963, pp. 81–2).

Halsey suggests similarly that in Britain it was widely believed in the 1950s and 1960s that:

> The maturing industrial societies were moving steadily towards meritocracy and certification as the principles of occupational placement in an ever more productive and efficient economic system of perpetual growth . . . Education, it seemed, was playing, and was destined still more to play, a crucial role in the formation of a more affluent and perhaps classless society (Halsey 1977, pp. 175–6).

Kogan, in a review of the experience of the OECD countries, concludes that their educational policies during the 1960s and 1970s were

> based on a belief in the ability of national authorities to prescribe purposes for education on the assumption that the investment of finance, of buildings and manpower and carefully thought out systems would enable countries to reach goals of a productive economy, stronger individual freedom and choice, and a more equal society (Kogan 1979, p. 19).

As I have suggested elsewhere, the specific tasks of education were, according to this sustaining rhetoric,

> to identify and develop talent (measured by, among other things, I.Q.); to seek and encourage motivation and aspiration; to rank individuals impartially according to merit and to allocate individuals to the hierarchy of economic opportunity on the basis of credentials and certification. Such procedures were essential in the creation of the One Best System in which traditional forms of class, racial, religious and sexual repression were to be overcome. Education was fundamental in the production of equal opportunity within an expanding, rationally planned and ordered society in which constant growth would

> provide the means for the more equal distribution of affluence and the elimination of human want and misery (Bates 1982b, p. 16).

Samuel Bowles and Herbert Gintis were to challenge this rhetoric in an upsetting book that appeared in 1976. It was called *Schooling in Capitalist America*.

Bowles and Gintis: the correspondence theory of schooling

Bernstein's work has been criticised on the grounds that it lacks a theory of ideology that can explicate the major conflicts involved in the division of labour in class societies (Sharp 1980). Such an accusation cannot be made against Bowles and Gintis. For them, class conflict is endemic to capitalist society. Thus, much of the liberal, progressive critique of schools is misdirected:

> Repression, individual powerlessness, inequality of incomes, and inequality of opportunity did not originate historically in the educational system, nor do they derive from unequal and repressive schools today. The roots of repression and inequality lie in the structure and functioning of the capitalist economy. Indeed . . . they characterize any modern economic system — including the socialist state — which denies people participatory control of economic life (Bowles and Gintis 1976, p. 49).

This structured inequality in economic life provides the context and the constraints for schooling that, despite its liberal progressive rhetoric, seems to produce — rather than to modify — the personal and psychological characteristics demanded by capitalist production. Indeed:

> the educational system serves — through the correspondence of its social relations with those of economic life — to reproduce economic inequality and to distort personal development . . . It is precisely because of its role as producer of an alienated and stratified labour force that the educational system has developed its repressive and unequal structure (Bowles and Gintis 1976, p. 48).

Thus the theme that is somewhat marginal in Bernstein's analysis becomes the central theme in the work of Bowles and Gintis. That is, the personal development of the individual as a member of a participatory community (which Bernstein implies as fundamental to the liberal education espoused by the new middle class) becomes subordinated to the need of the capitalist division of labour for mechanisms of domination and control suited to a particular hierarchical organisation of production. The result is that

> the educational system's task of integrating young people into adult work roles constrains the types of personal development which it can foster in ways that are antithetical to the fulfillment of its personal developmental function (Bowles and Gintis 1976, p. 126).

Thus, because of the domination of the education system by the needs of the capitalist class for an alienated work-force (that is, a work-force alienated from its own interests and identity in order to serve the interests of capital), the school reproduces in its own organisation and activities

the principles of order and behaviour that correspond with the conditions existing in the world of work. These conditions are not derived from the nature of technology, nor from the psychological potential of individuals, but from the interests of the dominant capitalist class:

> To reproduce the social relations of production, the educational system must try to teach people to be properly subordinate and render them sufficiently fragmented in consciousness to preclude their getting together to shape their own material existence. The forms of consciousness and behavior fostered by the educational system must themselves be alienated, in the sense that they conform neither to the dictates of technology in the struggle with nature, nor to the inherent developmental capacities of individuals, but rather to the needs of the capitalist class (Bowles and Gintis 1976, pp. 130–1).

Thus Bowles and Gintis argue that it is not simply the management of knowledge that is significant in schools, but also the management of social relations. The principles of social control implicit in the selection, organisation, transmission, and evaluation of educational knowledge are matched by the principles of control embedded in the social relations of schooling. 'The educational system helps integrate youth into the economic system . . . through a structural correspondence between its social relations and those of production' (Bowles and Gintis 1976, p. 131).

In particular, students are subjected to a form of social relations characterised by emphases on (a) face-to-face encounters that encourage obedience, docility, and submissiveness on the part of students, (b) a hierarchical division of labour between administrators, teachers, and students that corresponds to the organisation of work, (c) the removal of control over curriculum, pedagogy, and evaluation from students, and (d) the fragmentation of social life through the processes of meritocratic competition. As Bowles and Gintis summarise their argument for the correspondence principle:

> The structure of social relations in education not only inures the student to the discipline of the work place, but develops the types of personal demeanor, modes of self-presentation, self-image, and social-class identifications which are the crucial ingredients of job adequacy. Specifically, the social relationships of education — the relationships between administrators and teachers, teachers and students, students and students, and students and their work — replicate the hierarchical division of labor. Hierarchical relations are reflected in the vertical authority lines from administrators to teachers to students. Alienated labor is reflected in the student's lack of control over his or her education, the alienation of the student from the curriculum content, and the motivation of school work through a system of grades and other external rewards rather than the student's integration with either the process (learning) or the outcome (knowledge) of the educational 'production process'. Fragmentation in work is reflected in the institutionalized and often destructive competition among students through continual and ostensibly meritocratic ranking and evaluation (Bowles and Gintis 1976, p. 131).

This does not mean, of course, that all students are subject to precisely the same experiences. The processes of differentiation within schooling

parallel the processes of differentiation within the division of labour, thus different forms of consciousness that correspond with the division of labour are produced by the education system. For instance, different positions in the division of labour demand different orientations so that

> the lowest levels in the hierarchy of the enterprise emphasize rule-following, middle levels, dependability, and the capacity to operate without direct and continuous supervision while the higher levels stress the internalization of the norms of the enterprise (Bowles and Gintis 1976, p. 132).

These different requirements lead to a corresponding structuring of educational levels so that

> lower levels (junior and senior high school) tend to severely limit and channel the activities of students. Somewhat higher up the educational ladder, teacher and community colleges allow for more independent activity and less overall supervision. At the top, the elite four-year colleges emphasize social relationships conformable with the higher levels in the production hierarchy (Bowles and Gintis 1976, p. 132).

If this rather depressing picture is in any way accurate, it is a major reversal of the image of liberal progressivism that underlies the sustaining rhetoric of education. Shadow and substance are at odds. Moreover, if schools are as Bowles and Gintis portray them, it seems important to ask how they became so.

The answer provided by Bowles and Gintis, drawing on the work of the revisionist historians of education, is that

> changes in the structure of education are associated historically with changes in the social organization of production. The fact that changes in the structure of production have preceded parallel changes in schooling establishes a strong prima facie case for the causal importance of economic structure as a major determinant of educational structure (Bowles and Gintis 1976, p. 224).

But considerations of an economic kind are matched by other considerations of a political kind — that is, the need to maintain social control in periods of major social change resulting from alterations in the means of production and the division of labour. Katz, for instance, argues that the rise of mass education, while directly associated with the onset of the growth of corporate capitalism in the United States of America, was also a specific response to the consequent social disorder: 'public schools were created to alleviate major behaviorial problems and to shore up a social structure under stress' (Katz 1980, p. 78). In fact, suggest Bowles and Gintis, rather than the history of mass education being a history of liberation, quite the converse is true:

> The history of the structure, content, and control of U.S. education reveals a striking constancy in its self-conscious repression of youth. Control, not liberation, is the word on the lips of our most influential educational leaders (Bowles and Gintis 1976, p. 227).

Such a thesis is quite in keeping with our earlier analysis of the rise and establishment of educational administration. It would help to account for the professional and theoretical preoccupation with the language of con-

trol and also for the separation of educational from administrative concerns. In the first place, the rhetoric of administration embraced by professional and professor alike can be seen to parallel closely the rhetoric required by a newly emerging corporate structure in the division of labour — a structure that demanded the imposition of extended hierarchies in the control of large-scale production and distribution with the concomitant structure of dominance and submission. In the second place, the emphasis on administrative, rather than educational, ideas in the development of educational administration is a response to the necessity of displacing progressive educational ideas concerned with principles of personal liberation and participatory democracy from the language of administrators. If such displacement had not occurred, the acceptance and emphasis of such ideas would have made the contradiction between them and the oligarchical principles of the corporate State patent. Only such a separation in the minds of educational leaders and administrators of education could help

> defuse and depoliticize the potentially explosive class relations of the production process and . . . [serve] to perpetuate the social, political, and economic conditions through which a portion of the product of labor is expropriated in the form of profits (Bowles and Gintis 1976, p. 11).

The language of control and the subordination of progressive educational ideas to the social demands of the corporate economy can therefore be argued to be fundamental in the development of the rhetoric and the technology of educational administration.

The work of Bourdieu, Bernstein, and Bowles and Gintis is related, therefore, in several ways to the development of a critical theory of educational administration. They suggest, respectively: that attention be directed to the role of educational administration in the reproduction of dominant cultural élites; that the processes of educational administration are involved in the establishment and alteration of various educational codes that determine the nature of the message systems of schools — curriculum, pedagogy, and evaluation; and that educational administrators' preoccupation with the language of social control, and their separation and dismissal of educational issues, is what might be expected if mass education were to meet the needs of the corporate capitalist State. Underlying all three analyses is a concern with the parallels between structures of social, economic, and educational domination, especially as they are expressed through a division of labour dominated by cultural, social, and economic élites. The management of knowledge, through particular processes of selection, organisation, transmission, and evaluation, is seen to be determined through such social structures. The basic paradigm of such structures, as Weber (1978) noted, is that of the rationally ordered bureaucracy. It is to this model of organisation and its impact on the management of knowledge and identity that we now turn our attention.

Bureaucracy and the management of knowledge

Schools are bureaucratic organisations. At least so the overwhelming majority of organisational theorists have attempted to persuade us. That

is, schools are characterised by a hierarchy of offices, a system of rules and regulations, considerable specialisation of tasks, impersonal relations between members, written records, a career structure, salaried personnel, and organisational control of resources.

The rational organisation of collective action through the development of large-scale bureaucracies on such principles is regarded as one of the major achievements of the modern world. For Weber, as for many of his inheritors, 'bureaucracy is *the* means of transforming social action into rationally organized action' (1978, p. 987). Unlike many of his inheritors, however, Weber was dismayed by the spread of bureaucratic forms of social organisation. Indeed, he saw the unfettered pursuit of rationally calculated means towards the achievement of ends determined exclusively by 'dominant interests' as leading to the creation of a mechanical world essentially unfit for human beings. 'Bureaucracy', he said, 'develops the more perfectly, the more it is "dehumanized", the more completely it succeeds in eliminating from official business love, hatred, and all purely personal, irrational, and emotional elements which escape calculation' (Weber 1978, p. 975). Moreover, he viewed the resulting 'iron cage' as a terminal world whose inhumanity was characterised by a final 'mechanized petrification, embellished with a sort of convulsive self-importance' (Weber 1958, p. 182).

Weber's forebodings are recognised in many contemporary accounts of bureaucracies and the effects of bureaucratic 'hyperationalization' (Wise 1979). Three effects, in particular, seem important to our current analysis: they are the effects of bureaucracy on politics, language, and knowledge.

The politics of bureaucracy

As we saw early in our discussion, the rationalisation of small, relatively democratic school districts into the large systems required by the corporate managers of the municipal reform movement largely displaced the political activity of minority and working-class groups and replaced it with the 'objective expertise' of the professional manager. Our earlier account also recognised that, although this move was presented as a depoliticisation of mere opinion and its replacement by 'scientific' techniques of efficient management, what was achieved in reality was the replacement of localised democracy by the oligarchy of the cosmopolitan élites of the educational trust. This displacement, or disguising, of interests is in fact characteristic of the development of forms of bureaucratic control. That is, the process of bureaucratisation is directed towards the effective depoliticisation of organisational members and clients alike. As Hummel suggests:

> In bureaucracy, administration replaces politics. Not politics as the decision-making core activity of society — bureaucracy increasingly makes the central decisions that govern public and private life — but politics as the participatory activity of citizens co-operating or fighting with one another to work out solutions to public problems (Hummel 1982, p. 185).

In the bureaucratisation process, the essentially public process of political argument and decision making that is fundamental to democracy 'is replaced by the purportedly apolitical decision-making of the managerial few . . . the public, those affected by the decisions, is systematically ex-

cluded from the process' (Hummel 1982, p. 185). This is precisely the situation brought about in education in metropolitan areas by the imposition of corporate management techniques.

The major problem with such extensions of bureaucratic organisation is that, while they may increase efficiency, they decrease the meaningfulness of action. As Denhardt suggests:

> The rational model of administration may assist in efforts at prediction and control in the interest of efficiency, but it cannot provide an understanding of the meaning of organizational life or a critique of its limitations. Moreover, where the rational model serves as a model of appropriate human action, it provides an extremely limited view of the individual, especially with respect to the question of moral consciousness. Finally, since the rational model inherently serves the interests of social regulation, it cannot aid in the individual's search for autonomy and responsibility (Denhardt 1981, p. 123).

Given that education and democracy both require the development of autonomy and responsibility in the search for common solutions to public problems, such a severe limitation on the contribution of bureaucracy to the rational organisation of social life can be seen to have serious consequences. If, as Greenfield (1973, p. 552) suggests, 'what many people seem to want from schools is that schools reflect the values that are central and meaningful in their lives', a bureaucratised school seems a singularly inadequate response. That it is so is not only due to the depoliticisation involved, but also because the language and epistemology of bureaucratic schools are singularly deficient in their ability to articulate the aspirations and discontent of those they ostensibly serve.

The language of bureaucracy

The language of bureaucracy, as Hummel (1982) points out, is unidirectional and acausal. That is, while the language of ordinary social life consists of dialogue between individuals who constantly reverse the flow of information and explanation, the language of bureaucracy is the language of instruction, of rules and regulations that allow no challenges and provide no explanations. The most extreme form of bureaucratic language is that embodied in the computer:

> Clients and customers feel this one-directionality most acutely when they try to talk back to a computer. They don't know computer language, and even if they did, the program would not allow them to be heard. The complainant who asks after the identity and purpose of the miscreant who set up the program is effectively blocked by that very program from pursuing the question. The computer, through its requirement for specialized language knowledge to operate it, protects its operators from attempts by laymen to find the cause of their discomfort and powerlessness. Once programmed, the computer talks only one way, from the top down. Its language is one-directional. The fact that the language itself contains no clues as to why the program was set up in one way and not another means it is also acausal. Acausal language hides the power interests of those who control it (Hummel 1982, pp. 152–3).

The language of bureaucracy, like the language of computing, is invariably couched in the imperative of instructions, to which the client or functionary must respond with information. The information supplied is then checked against the lists of conditions formulated to represent the bureaucracies' rules and regulations, and a response given. The response is given without explanation other than that the information supplied meets or fails to meet the conditions imposed by the bureaucracy. Language of this kind is a control relationship, a form of domination rather than of communication:

> A language that does not allow mutual definition and redefinition by speaker and hearer is admirably designed to maintain a one-way power relationship from the top down, especially in situations in which people are dependent on bureaucracy for their survival (Hummel 1982, p. 175).

The employment of such language is an integral part of the structures of dominance and submission required by the division of labour in corporate society. It admirably functions to produce both technical and social control in production systems. As Hummel again points out:

> One-directionality makes bureaucratic language impenetrable to attempts from below to understand the principles of its ultimate sources. The division of labor is already paralleled by the analogous structure of the available grammar, and one-directionality parallels bureaucracy's hierarchical structure (Hummel 1982, p. 175).

But the understanding of the principles that lie behind action and events is fundamental to the process of education and to democratic participation in social affairs. So the use of bureaucratic language is contradictory to the intent of both education and democracy. The bureaucratisation of the language of educational administration, therefore, is contradictory to the educational purposes that, ostensibly, it exists to promote. A similar contradiction exists regarding the epistemology of bureaucracy.

Bureaucracy and the structure of school knowledge

Just as bureaucracies use language in a specific fashion consistent with their intention to impose an ordered authority in the interests of achieving the goals of their controlling interests, so do bureaucratic organisations impose a particular structure on the knowledge that is fundamental to their operations. That is, bureaucracies employ an epistemology, or theory of knowledge, of a particular kind.

We have already noted Bernstein's observation that the hierarchical division of labour and prestige in the wider society encourages strong classification and tight framing of the message systems of the school. A similar position is outlined by Wake (1979) in his application of Berger, Berger and Kellner's (1973) analysis of bureaucratic consciousness to education. Wake's main argument is that 'knowledge within bureaucratized schools acquires characteristics adapted to organizational needs' (1979, p. 16). These characteristics may or may not have any direct relationship to the ways in which such knowledge has been historically generated. Nor is it common to find that knowledge in schools is related to its capacity to liberate creative human powers. Rather, the characteristics of knowledge

required by bureaucratised schooling are a result of the 'presumed need to create and maintain an enduring and efficient bureaucratic structure' (Wake 1979, p. 16).

In detail, Wake takes each of the characteristics of the cognitive style of bureaucratic consciousness identified by Berger, Berger and Kellner (1973) and illustrates their impact on the organisation of school knowledge as follows.

In order to maintain the stability of the organisation, information must be made available in standard and relatively permanent ways. Otherwise, if what counted as knowledge changed in an unpredictable and random fashion, the routine tasks of administration would be made inordinately difficult. Thus, 'in bureaucratized schools, institutional needs tend to dominate. That is, knowledge is treated as if it were composed of units that can be organized into systems of ordered parts' (Wake 1979, p. 3).

These units are ordered according to principles of stratification and status. Hierarchies of both order and status are constructed that correspond to the 'value' of certain kinds of knowledge and to the seniority of those who 'possess' such knowledge. Thus, in a reversal of the conventional idea that knowledge is independent of position, bureaucratic schools define the status of knowledge as dependent on the status of the person holding it:

> Certain types of knowledge are commonly believed to be intimately linked with identifiable functions in the organization so that the stock of knowledge at hand for any individual is dependent on his status in the hierarchy (Wake 1979, p. 6).

Alongside the organisation of knowledge into stratified patterns of status, knowledge is also ordered into particular sequences. Although some sequences appear to derive from the logical precedence of conceptual complexity (for instance, subtraction precedes division), the logic of many sequences is obscure or, more likely, arbitrary. Frequently, the sequences of knowledge are an organisational convenience rather than a pedagogical or logical necessity:

> Sequentiality is a response to an organizational problem as much as anything else, but typically, it is not thought of that way, and, very often, not thought of as a problem. Organizational imperatives often tend to be regarded as evident facts rather than problems to be resolved (Wake 1979, p. 8).

Similarly, knowledge is presented in predictable ways, routinised in the pedagogy of classroom life. This is done in order to increase the efficiency of learning and it often constitutes the grounds of legitimacy between administrator, teacher, and taught. Thus, what is predictable is legitimate. The effect, argues Wake, is to remove substantial areas of inquiry from the world of the classroom: 'although predictability contributes to efficiency, it also has the unintended consequence of de-problematizing large areas of activity which could sensibly be viewed as areas of further exploration or enquiry' (Wake 1979, p. 10).

The communication of knowledge is distorted through its association with the hierarchy of status. Thus communication as a process of exam-

ination and argument becomes problematic. Distortions in communication are

> accentuated or confirmed by the prior existence of hierarchical social relationships; consequently, communications in schools are often distorted in that unnecessary reservations are placed upon the discussion of propositions, and the possible ways of interpreting the reality of any given situation may be unilaterally and restrictively defined (Wake 1979, p. 13).

Knowledge in schools is also objectified: that is, it is frequently dissociated from the historical, social, and personal context of knowing. This is most particularly the case in the conduct of examinations where 'objective' knowledge is considered and evaluated without reference to social context. Indeed, the whole concept of objective knowledge, as Wake points out, is a result of a process of reification. Thus, 'in the formally organized school, the agency of the knowing subject in the knowledge constituting process is often suppressed or ignored' (Wake 1979, p. 15).

Finally, the concrete knowledge derived from experience is considered of less value than abstract knowledge related to objective categorisation and formalised principles. This separation of the concrete from the abstract is a close parallel to the separation of conception from execution evident in the division of labour.

> Bureaucratic organizations tend to place a low premium on concrete experience and a high premium on abstract modes of thought; this serves organizationally useful purposes. In practice, concrete experiences are regarded as the province of low status personnel whilst abstract thought is the domain of the upper levels (Wake 1979, p. 16).

Thus, suggests Wake, the structuring of knowledge in bureaucratised schools has more to do with the imperatives of organisation than with the nature of knowledge or the knower. In effect:

> Knowledge, as disseminated and sometimes generated by bureaucratized schools, is adapted to the cognitive style of bureaucratic consciousness. The salient features of this cognitive style are orderliness, componentiality, arbitrariness, predictability, explicit abstraction, moralized anonymity and passivity. The conditions under which learning is presumed to occur in bureaucratized schools favour the development of that form of consciousness which is peculiarly suited to social life in bureaucratized institutions (Wake 1979, p. 16–17).

It seems clear from our analysis that schools, while claiming the independence and autonomy that flow from the ideals of academic freedom and scientific rationality in the representation of knowledge, structure their presentation of knowledge in particular ways. Especially, they tend to follow a bureaucratic form and present knowledge in ways compatible with that form of social organisation, a form acknowledged by Weber to be peculiarly adapted to ensure the power and control of dominant élites. Thus, as Bourdieu (1977) suggested, the power of such forms of symbolic control is heightened by both their claim to an objective status and their systematic distortion of interests and evaluations.

Politics, administration, and the management of knowledge

Rationality, justice, and institutional life

The preceding analysis gives grounds for believing that what Weber feared most is coming to pass. That is, the iron cage of bureaucracy is enclosing more and more areas of social life through its techniques of rationalisation and control. What we are witnessing (indeed, what we are increasingly subjected to) is

> the widespread assumption of a particular viewpoint, a sort of organizational ethic, one which supports the extension of an organizational society and offers itself as a way of life for persons in our society. To the extent that we accept that ethic, we will come to see the world in terms of order and structure rather than conflict and change; we will come to value discipline, regulation and obedience in contrast to independence, expressiveness, and creativity. And we will see the world in terms of techniques for resolving inconveniences in the smooth and efficient administration of human affairs. What is especially important is that this new ethic of organization does not just instruct our activities in organizations (as do theories of organization); rather, its power is so great that it recommends these same patterns of thought and behavior for our lives generally (Denhardt 1981, p. 5).

The problem with such an ethic is that, while it may increase the rationality (that is, the efficient organisation of social action) for organisations and bureaucracies, it decreases the possibility of rational, purposive action on the part of individuals. This is a direct result of the organisational systems of control. Indeed, as such systems multiply, the scope for rational action on the part of individuals is reduced to choices between systems of control:

> The dilemma faced by the individual seeking a context for meaningful action is that as the continued bureaucratization of society displaces earlier political, vocational, and religious concerns, the individual is left with few opportunities to engage in actions outside organized systems. The problem with this . . is that organized systems are inherently based around notions of regulation and control. This means that the organized individual is placed in the contradictory position of attempting to pursue meaningful choice within systems of regulation, a result that is both confounding and alienating in its impact (Denhardt 1981, p. 8).

The problem, as a number of commentators have suggested, is that the epistemology underlying such forms of organisation is inadequate and inconsistent with our commitment to ideals of rationality, equality, and justice. Thus, our dominant form of social organisation produces contradictions that may either erode our commitment to such ideals or provide the dynamic for change.

Such critiques of the social contradictions of capitalist society have, for the most part, been made most clearly by Marxist scholars, especially those belonging to the Frankfurt School. However, recent critiques have also

been presented by champions of liberalism. Strike, for instance, points out that, although the concept of rationality is central to the historical development of liberalism, the dominance of empiricist epistemologies has led to the attenuation of the concept:

> Liberalism has had an inadequate concept of rationality. Rationality, I have repeatedly urged, is among the basic values of a liberal society. Liberals have traditionally been empiricists. Empiricism, however, has proven inconsistent with other liberal values. It has evolved in such a way that it has become mechanistic. In its behavioristic form it has eroded the very notion of rationality itself and consequently has undermined views of authority to which rationality is central, supporting more bureaucratic and hierarchical notions (Strike 1982, p. 256).

Alongside this inadequate epistemology, Strike argues, liberalism has also failed to regulate economic life according to principles of fairness and justice. As a result, the organisation of production, distribution, and schooling fail to meet the requirements, or provide the basis, for the development of a just society:

> Liberalism also failed to regulate its economic life with acceptable ideals of justice. Thus we now produce goods and services in large hierarchical, bureaucratic, and socially segregated institutions. The organization of work and the division of wealth, power, and human resources make it difficult for people to develop rational preferences. Schools reflect these failures. Economic efficiency is the dominant value expressed in educational policy and is understood in a way which is often at odds with the school's role in developing rational preferences and in developing enlightened citizens (Strike 1982, p. 256).

The problem is, then, that the bureaucratic organisation of society and the consequent bureaucratisation of schools imply both an epistemology and a politics that are antithetical to those ideals of rationality and justice that are fundamental to a liberal, democratic society. Further than this, if Denhardt and Strike are right, the dominance of bureaucratised forms of social relations and the resultant formation of bureaucratic consciousness may well exclude other models of institutional, epistemological, and political order from our imagination. One of the major criticisms made of the neo-Marxist critiques of the domination of education by the division of labour is that such critiques are themselves too deterministic. That is, in pointing to the pervasiveness of such domination they also imply its inevitability; they presume that the cycle of capitalist domination of schooling, which produces a compatible structured form of consciousness, which reinforces the capitalist division of labour and hierarchy of domination, which assists in the domination of schooling, cannot be interrupted.

More recent analyses have, however, pointed to the contradictory effects of such institutions as schooling. For instance Levin (1979, 1982) points to the disruptive effects of the schools' 'overproduction' of educated labour on the hierarchical domination of the workplace. Similarly, the contradiction between the legitimating ideology of the meritocracy and the reality of class reproduction in education that we noted earlier in our discussion is also a significant point of tension. However, even though

these contradictions exist, little more than piecemeal change can be expected unless we have available alternative models of the possible relationships between organisation, epistemology, and politics. There are, of course, a number of models available from the historical study of such relationships. Several of the dominant models have been set out by Kerr (1981) in her analysis of the epistemological and political assumptions underlying various forms of knowledge utilisation.

The epistemological and political assumptions of institutional forms

It is increasingly recognised by philosophers (Wittgenstein 1953; Toulmin 1972; Lakatos and Musgrave 1970) and sociologists (Berger and Luckmann 1967; Holzner and Marx 1979) that conceptions of what counts as knowledge are differentially distributed within and between various social structures. That is, knowledge is socially constructed in different ways within different knowledge communities. If this is the case historically and anthropologically, it is also probable that different institutional structures incorporate different views of knowledge. We have, in fact, suggested that bureaucratic institutions are typified by a specific authoritarian concept of knowledge. Other institutional structures presumably will display alternative conceptions or epistemologies.

Kerr (1981) suggests that at least three different conceptions of knowledge can be detected in our current institutions, that each is defective in specific ways, and that an alternative epistemology and institutional structure is required to accommodate our most justifiable understanding of epistemology and politics.

In the first place, Kerr delineates three models of knowledge and collective action from her historical comparison of Platonic, Aquinian, and Humean systems, and shows how each of these relate to a particular institutional form.

The **Platonic** conception, she suggests, depends upon the idea that 'one can have knowledge only of Universals or Forms, and the way one has knowledge of these Forms (such as Truth, Beauty, and so forth) is by a direct, infallible intuition or an immediate grasping' (Kerr 1981, p. 485). Only some individuals are capable of such intuition, and then only after a long period of education. Such people, in a proper political order, become philosopher kings, who are responsible for making decisions concerning communal activities. The proper political order is, by analogy, akin to the ordering of the organs of the body in which the head (the philosopher king) rules the heart (the spiritual guardians), which rules the belly (the workers). 'Given that only the philosopher kings possess knowledge . . . knowledge utilization is unproblematic and "automatic" if only persons act in accord with their proper functions in the political order' (Kerr 1981, p. 486). The justice of such an arrangement is self-evident: 'those who make decisions possess knowledge, one thing that can be known is justice, and those who possess knowledge of justice cannot help but act justly' (Kerr 1981, p. 486).

As Kerr points out, such an epistemology is perfectly suited to bureaucratic organisations, as the assumption of the infallibility of the philosopher kings of bureaucracy leads to the imposition of a hierarchical order with a certain inevitability:

> The principally Platonic epistemology of bureaucratically organised work [is] apparent: only the occupants of the top boxes on the chart are assumed to know what should be done, and their "knowledge" is not tainted with what might be learned on those lower levels of cognition where one deals with the sensible world . . . further, the organization needs no mechanism to learn from its mistakes, for if it is functioning on directives of the top-box knowledge holders, its actions cannot help but be perfect (Kerr 1981, p. 492).

Alongside the epistemology, therefore, lies a theory of collective action that is justified by appeal to that epistemology. In this case, the intuitive knowledge of the philosopher kings leads to a hierarchy of order and control over collective action — the paradigm is that of bureaucracy.

The **Aquinian** conception of knowledge and order differs markedly from the Platonic form in that Aquinas assumes that Divine Law (which corresponds roughly to the Platonic conception of the Forms) cannot be known by humans, but only by the angelic intellect. People can know only material things, and moreover, 'human knowledge can go awry at a number of points' (Kerr 1981, p. 487). These significant differences in epistemology lead to significant differences in the theory of politics — or collective action. Thus, 'given the error-proneness of human knowledge . . . the best that can be expected for collective action in this life is that we will "muddle through" ' (Kerr 1981, p. 487). But, as humans need some sort of collective existence, a source of authority is also needed:

> Stability is essential to collective life, and because that is so, collective action requires a strong sense of obedience and a strong central authority to whom that obeisance is paid. Of course, even the best central authority, being human, will make mistakes in reasoning up from experience, and so issue directives that are faulty on the knowledge criterion, i.e., directives that are at odds with divine reasoning. Nonetheless, it is better to remain obedient to a mistaken authority than to risk the dissolution of the political order that provides the structure for collective action (Kerr 1981, p. 488).

The parallels between such an epistemology and view of collective action and the structures and operations of institutionalised professions appear strong. Professional claims to being the sole repository of authoritative knowledge of its own work, professional authority in the client relationship, and professional claims to the determination of legitimacy and fraud are seen by Kerr as the core of professional activity. As a result, the Aquinian foundations of professional models of epistemology and politics are clear:

> Much as Aquinas proposed that citizens ought to obey the ruler whether or not they think the ruler's edicts are right or good, so professionalization gives the clear impression that even though the professionals are fallible, the laity should obey orders given by those whom the profession certifies. Aquinas's theory of collective action requires that the ruler's authority not be questioned and be given obeisance so that a structure for action be maintained. Professionals, with perhaps less noble, though similar reasoning, require that the authority of the profession not be questioned and be given obeisance

> so that the structure within which the professionals work can be maintained (Kerr 1981, pp. 493–4).

Thus, once again, a particular epistemology and a particular associated theory of collective action are seen to underlie a particular institutional structure. Despite the uncertainty of knowledge, authority must be maintained as a fundamental feature of the political life of professions.

The **Humean**, or more correctly the **Hume–Mill**, conception of knowledge and politics constitutes the third basis of distinction and analysis made by Kerr. The joint use of Hume and Mill is legitimate, as Hume's work on the conception of knowledge was the basis on which Mill built his conception of collective action.

Hume begins by rejecting both Platonic and Aquinean appeals to a priori reasoning about matters of fact, which, he claims, leads to nonsensical statements. Hume claimed that two types of knowledge are possible. Firstly, certain truths are so by definition, or a priori reasoning (such as in mathematics): we know such things because of the relations between various concepts. Secondly, we can arrive at probable knowledge through repeated observation of events that are apparently joined together in some fashion. In such cases, we often attribute cause and effect.

The importance of this view of knowledge and its difference from Platonic and Aquinian conceptions is the idea that evidence rather than revelation constitutes the grounds for belief or knowledge claims. Thus knowing is not a quality of the person, but of the acceptability of evidence:

> With such a conception of empirical knowledge, the knowledge claims of one person are qualitatively equal to those of any other, providing that those persons' perceptual apparati and the conditions for their observations of the pairs of events are of equal quality (Kerr 1981, p. 489).

Mill's theory of collective action hinges on this concept of equality in observation and reasoning. For Mill, it was clear that anyone can lay claim to empirical knowledge. Thus it was open to every individual to evaluate knowledge claims and decide their own course of action:

> It is more important that individuals be free to evaluate knowledge claims and to decide what should be done, than for individuals to heed as prescriptions the claims of 'experts' and others who would argue that their knowledge is qualitatively better . . . there is *nothing*, save for not harming another, that is more important than individuals' choosing of their own courses of action (Kerr 1981, p. 490–1).

This claim for the importance of individual rationality and freedom of decision forms the basis, Kerr argues, of contemporary attempts at policy research. That is, policy research and the institutions that appeal to such research employ an epistemology that is empirical in the Humean sense and a theory of collective action that is based on an assessment of the competing empirical claims of differing individuals. As far as the assessment of empirical evidence is concerned in policy research,

> the principal idea is to identify independent variables both that are predictively powerful and that can be controlled in social programs. In other words, the researchers' responsibility is to inform policy makers of what actions render what results; policy makers must, then,

> decide whether to use the levers that the researchers have discovered . . . [However,] to complicate matters, policy researchers commonly disagree about what actions get what results (Kerr 1981, p. 494).

Collective action can best be grounded in conclusions drawn from an assessment of competing truth claims. The challenges over data collection, methodology, and reasoning are presumed to improve the quality of the knowledge available. Such knowledge improves the ability of individuals to make the best possible choice. Where conflicts occur, Mill argued that, because of the equality of individuals, the preferable decision was one that produced the greatest good for the greatest number.

Thus, once again, a particular epistemology and a particular theory of collective action underlie a particular institutional structure.

Knowledge, community, and education

It seems, if Kerr is correct, that particular conceptions of knowledge and of collective action can be systematically related to particular institutional structures. Different institutions both contain and promote different conceptions of knowledge, and they manage their knowledge and their affairs in different ways. This raises the issue of whether we can simply choose which institutional (and therefore epistemological and political) model we prefer, or indeed whether membership of a particular institutional structure chooses for us (as it were) the epistemology and form of collective action most compatible with its mode of operation. Is it simply a matter of choice, or is there more involved than a random preference?

Historically, each of the epistemologies and theories of collective action Kerr discusses has been built on a challenge to the assumptions or inadequacies of the previous conception. Thus each has been recognised as an improvement on the former. (Not so, apparently, with our institutional structures!) As with previous conceptions, the Hume–Mill conception is currently regarded by political theorists and moral philosophers as inadequate in one major respect — its lack of a theory of community.

As Kerr points out, a theory of community is essential to a defensible liberal theory of social action. Indeed, no theory of social action makes much sense if the social dimension is ignored. Kerr (1981, pp. 497–8) summarises the contemporary position as an integration of various arguments as follows:

1. Whatever rational, self-interested persons would choose for themselves would contribute to their development and enjoyment of their own capacities and abilities (Rawls 1971).
2. Just which capacities and abilities are worth developing and the exercise of which capacities and abilities is enjoyable depend in crucial ways upon others in the community of which one is a part (Wolff 1968).
3. The options, among which individuals are free to choose, should be in the community or public interest, or at least not against it (Wolff 1968).
4. What is in the community or public interest should be formulated by individuals as members of the community (White 1973) rather than being left to determination by the economic elite, as turned

out to be the case in free-market, party-controlled liberalism (Macpherson 1977).

It is at this point that current work in the philosophy and sociology of science converges with such conclusions drawn from political theory and moral philosophy, for such work emphasises that the production of scientific knowledge is located inevitably within the traditions and structures of particular social and epistemic communities (Kuhn 1962; Toulmin 1972; Mulkay 1979). Thus the most coherent contemporary accounts and analyses of both the production of knowledge and of collective action focus on the importance of the concept of community.

This has important implications for educational administration, for it implies that there are coherent epistemological and political grounds for a shift away from the inadequate conception of bureaucracy as a model for the management of knowledge. It also sketches an outline of a form of educational administration that institutionalises more adequate conceptions of knowledge and collective action. For schools, this means two fundamental shifts away from the language and structures of bureaucracy. Firstly, it requires an epistemological shift from revealed knowledge to critical reflection. As Strike puts it:

> We need to develop a pedagogy consistent with the values of liberal democracy. This means we need to see learning in terms of an epistemology which emphasizes acquiring the conceptual tools for critical thought, instead of an epistemology which emphasizes behavioral change (Strike 1982, p. 255).

Secondly, such a conception requires an alteration in the politics of the school. That is, a shift away from an order based upon hierarchical control towards one that emphasises the democratic structure of a participative community. As Strike puts it:

> We need to make a liberal theory of justice the central value served by educational policy. Perhaps the foremost need currently is restoring citizenship to its role as the predominant public task of the school and reducing the subservience of schools to the values of economic efficiency. This is not just a matter of doing a better job teaching civics. It is a matter of making public concerns part of the warp and woof of educational programs (Strike 1982, p. 255).

The creation of institutional structures that will manage knowledge in ways that best serve such concerns is the major agenda facing the imagination of those who are committed to a truly educational administration.

Towards an educational theory of administration and the management of knowledge

New ways of viewing the world invariably grow out of our critique of current conceptualisations. They do not grow from a slow accretion of facts. In this respect, Kuhn's (1962) explanation of revolutions in scientific thinking is equally relevant to our thinking about institutional and social arrangements. Much of the early part of this monograph has been devoted to a critique of current administrative theory and its application to educational activities. In particular, the conceptualisation of educational

administration as a technology of control — especially in its bureaucratic, or systems-theoretic, forms — has been seen to lead to four major problems.

Firstly, the dominant traditions of theory and practice in educational administration serve to justify uncritically patterns of organisation and control in schools and school systems that both mirror and reinforce the dominant patterns of inequality in the wider society. I have argued that these inequalities were reinforced by the historical depoliticisation of minorities and working-class groups and their dominance by an emerging cosmopolitan élite. Moreover, this alteration in political relations was deeply influenced by the emergence of the corporate State as it reorganised work into hierarchies of dominance and submission without respect to considerations of justice and equality. Schools, under pressure from the cosmopolitan élites of the corporate society, have both modelled themselves on, and subjected themselves to, the demands of these élites such that they act as agencies of behavioural control and agencies of vocational allocation. By doing so, schools built into their technologies of control the injustices and inequalities of the wider society and became incapable of redressing what Rawls (1971) has called undeserved inequalities. Any adequate alternative model of educational administration needs to address this problem — the problem of the justice and fairness of such social and educational arrangements.

Secondly, the preceding analysis has led to certain questions about the way in which knowledge is structured and represented in schools and school systems. It has been my argument that the selection, organisation, transmission, and evaluation of knowledge in bureaucratised schools can be seen as resulting, not from any justifiable epistemological or social basis, but from the demands of bureaucratic convenience. Moreover, as the bureaucratic structures of schools imitate the patterns of dominance and submission of the corporate order, knowledge itself becomes structured in ways that imitate various hierarchies of status. In particular, technical knowledge displaces cultural (i.e. historical, aesthetic, and ethical) knowledge from its position of central importance in the curriculum.

Thirdly, my analysis has suggested that the bureaucratic hierarchy of dominance and submission employed by the school so structures communication and discourse as to produce a didactic pedagogy that is unidirectional and acausal. The effect of such a structure of communication is to replace rational discourse with a form of behavioural management that prevents the development of rationality and the equal consideration of interests.

Fourthly, I have argued that the acceptance of bureaucratic, or systems, models as appropriate patterns for school management involves conceptions of epistemology and collective action that lack a fundamental commitment to the ideas of community and to the mutuality of social concerns.

If these are the fundamentals of a critique, what are the appropriate responses? In my view, there are at least four issues that must be taken account of in constructing an *educational* theory of administration and an appropriate institutional structure for the management of knowledge. These are the democratisation of social relations, the democratisation of knowledge, the democratisation of communication, and the democratisation of cultural concerns.

The democratisation of social relations

Most texts on educational administration contain only attenuated conceptions of democracy. Most texts employing bureaucratic, or systems-theory, models of educational administration are, in fact, hostile to the practice of participatory democracy. They prefer the theory of the firm to a political philosophy that focuses on these issues of justice, fairness, and equality. This is hardly surprising, for, as I have already noted, the development of bureaucratic forms of educational administration could only proceed without obvious contradiction if conception were separated from execution — or, rather, if educational and administrative concerns were isolated from each other. The result of this isolation has been the creation of a form of educational amnesia on the part of educational administrators, whereby fundamental social and educational issues have been passed by. But, as Foster remarks:

> [While] the fundamental purpose of administration is given a few paragraphs in the introductory chapter in the texts on school management . . . it is the ends of schooling that really must be at the heart of the dialogue on what constitutes effective administrative behavior. Should issues such as class relations and educational structure be left in the sociology class or should they become part of the theory that informs actual administrative practice? (Foster 1980a, p. 504)

It is my contention that such issues are fundamental to an educational theory of administration and that to ignore them is to fail to develop a theory of *educational* administration, if for no other reason than that

> the crisis in institutional legitimation is a crisis that can only be addressed by considering the ends of the organization and the effect of the economic and political system on these ends. A reconstructed theory of administration may well begin to take a practical view of such issues as legitimacy, the social distribution of knowledge, the ideological dimensions of schooling, the role of the school in mediating class conflict, and the place of administration in neutralizing institutionalized hierarchies of power which prevent the equalization of opportunities (Foster 1980a, p. 504).

So a reconstructed theory of educational administration must include a consideration of the ways in which external social structures penetrate, or are reproduced through, the administration of schooling. It must also include a reflexive assessment of the inhibitions and constraints such administrative procedures impose on the achievement of the social aims of schooling. If, for instance, the administrative practices of bureaucratised schools deny justice, fairness, and equal treatment, then, as Strike suggests, those practices must change. Indeed, the relative autonomy of school systems may well provide the grounds for the initial transformation of administrative practice in schools and a subsequent contribution to the transformation of wider social structures.

For instance, there is widespread criticism of the demeaning nature of the organisation of work in industrial societies. This does not mean, it should be noted, that work is intrinsically demeaning, only that certain forms of the organisation of work are. Thus appeals to the principle of justice may demand the transformation of our work relations, for, as Strike suggests,

'to be entitled to justice is to be entitled to those social conditions which realise it' (1982, p. 246). Indeed:

> If the undemocratic organization of work is in fact a serious problem, then in a society in which the fair value of equal liberty is maintained, change should be forthcoming . . . If any autonomy over one's work or work which allows for development and employment of intelligence and creativity is important in promoting equal liberty, equal opportunity, or self-respect, this should relate the social organization of work to the basic principles of justice (Strike 1982, pp. 245–6).

Demands for the reconstruction of work according to the principles of justice implicit in the commitment to principles of social democracy are increasingly widespread. One such statement is that of Levin, who argues that:

> The tyranny of the workplace is not legitimate and . . . every employee ought to have a right as a 'citizen' of a workplace to participate in those affairs that impact on his or her life. Economic democracy . . . refers to the democratic participation of workers in the decisions that affect their working lives (Levin 1979, p. 1).

Moreover, Levin argues that schools, even in their present form, are contributing to the transformation of the workplace. Beginning from the contemporary phenomenon of educational 'overproduction' coupled with the industrial processes of de-skilling and routinisation, Levin argues that:

> Not only do the alternatives for the educated person seem to be deteriorating in both quality and quantity, but an analysis for the longer run suggests that the forces that are creating this deterioration will continue to prevail. Thus, young and educated persons are likely to find themselves in situations where their expectations and skills exceed those which are associated with available jobs (Levin 1979, p. 10).

As a result,

> since most jobs will not have the intrinsic characteristics that would keep such persons engaged, the inadequate nature of the extrinsic rewards will operate to make it more and more difficult to integrate such persons into the labor force. That is, the lack of opportunities for promotion and the limited wage gains in conjunction with the relatively routinized nature of most jobs will tend to create a relatively unstable workforce (Levin 1979, pp. 10–11).

Similarly, the traditional techniques of integrating students into schools by promising them 'good' positions in the division of labour and the associated upward mobility are contradicted by the routinisation of work and the reduction of opportunity. As a result,

> while historically the operations of schools can not be understood without an examination of their correspondence with the requirements of the capitalist workplace, the independent dynamic of schools and their internal contradictions also represent forces for challenging the institution of the workplace (Levin 1979, p. 12).

The 'new' worker, argues Levin, is likely to press for major initiatives in the democratisation of work. Essentially, analyses of such initiatives

in Europe and the United States of America suggest that the restructuring of social relations involved in the democratisation of work demands concomitant changes from the education system:

> It appears that there are at least five dimensions of economic democracy that would require changes in the educational system. These include (1) the ability to participate in group decisions; (2) capacity for increased individual decision-making; (3) minimal competencies in basic skills; (4) capacity to receive and give training to colleagues; and (5) cooperative skills (Levin 1979, p. 18).

Such skills are quite different from many of the behavioural and technical skills required by the traditional organisation of work. They are also unlike the skills of supervision and control that dominate traditional school practice. However, they are clearly more compatible with a version of social relations that stresses justice, fairness, and equality. Such principles may be better accommodated in an altered practice of educational administration that substantially modifies its commitment to techniques of hierarchical control.

The democratisation of knowledge

As Holzner and Marx suggest, 'bodies of knowledge, far from being universally held or accessible, are in fact socially distributed. Specialized knowledge is available to relatively few individuals, sometimes with sharply defined locations in the social structure' (Holzner and Marx 1979, p. 217). Moreover, 'access to knowledge, governed by class position, is distributed *organizationally* (Foster 1980b, p. 22). Schools, as Bourdieu, Bernstein, and Bowles and Gintis have argued, are part of the process of the organisational distribution of knowledge. That is, they select, organise, transmit, and evaluate knowledge differentially according to their classifications of their pupils.

With the development of the information society (Machlup 1962), the differential distribution of the production, dissemination, and utilisation of knowledge becomes a matter of urgent concern. For the principle on which the information economy is based is that knowledge is property and the ownership of knowledge is therefore a potential source of financial gain. Thus, as Schiller (1982) has pointed out, the increasing economic value of information is associated with three trends: firstly, 'the information resource base itself is shifting from the public to the private sector' (Schiller 1982, p. 3); secondly, information is increasingly available only on a fee-for-service basis; thirdly, as the value of information grows, previously public sources of information (available through governments) are becoming privatised or inaccessible. This shift to the information economy is closely linked with the impact of computerised information banks and telecommunications.

The issues raised by such an information revolution for the democratisation of access to information are serious enough in the public sphere. The implications for schools are even more significant. Firstly, the bureaucratic organisation of information in schools typically makes full use of systematic textbooks, which survey and structure available information in ways that meet the bureaucratic demands outlined by Wake (1979). Secondly, such textbook systems are being supplemented by curricular

packages that structure knowledge, pedagogy, and evaluation in even tighter ways (Apple 1982). Moreover, primary reliance on such materials often leads to the dismissal or underutilisation of the only major unprogrammed source of information in the school — the school library. This may, of course, be because so many school libraries are so poorly resourced that they are unable to provide the information services that would, in fact, support a democratised curriculum. Thus, typically, schools rely on textbooks and prepackaged systems of knowledge. The structure, antiquity, and rigidity of such systems of knowledge are in stark contrast to the information flows of the information economy.

The information economy is largely structured around the extensive use of on-line data bases and bibliographic retreival systems. Access is thus available instantly to local, national, and international users of information through various combinations of computers and telecommunications. What this means, for those who have access to such systems, is that either information, or the location of particular information, can be immediately produced in respect of an almost infinite series of topics related to the questions in the user's mind. The only major limitations are, firstly, the range of information stored in the data-bases and, secondly, the adequacy of the indexing, abstracting, bibliographic, and thesaural structures through which access is gained.

The data-bases available are usually developments of periodical abstracting services. As much of the latest work in science, social science, technology, politics etc. is published not in books but in journals, access to such data-bases can give an almost real-time view of the state of the art in any particular field. As most journals are associated with professional or scholarly associations, such journal publications also represent the collective views and internal debates current among particular expert communities of scholars.

Clearly, the existence of such stores of information and the capacity for instant retrieval or location has the potential for the democratisation of access to knowledge, provided that the economic and social structuring of access is non-restrictive and that individuals develop the skills needed to use the thesaurus of keywords, the branching programs, and the bibliographic structures that index the information.

It is notable that schools very seldom have access to such data-bases. Nor do they often teach children such information-seeking skills. Thus schools tend to perpetuate a conception of knowledge that is shaped by the structure of textbooks many of which are — in terms of the explosion of the information economy — dated, inflexible, and inaccurate. Indeed, in the areas of science and social science they frequently provide gross misrepresentations of both the substance and orientation of the fields (Apple 1979). Yet the easy access to information that the new computerised data-bases and bibliographies provide could transform the curriculum of the school into one where teachers and pupils construct their own conceptions of knowledge by interrogating the available information bases related to their particular concerns.

Such possibilities, of course, demand a constructivist approach to knowledge and have the potential for substantial alterations to the hierarahical authority of administrator, teacher, and pupil. Quite different forms of order in administrative relationships would need to develop in order

to replace the authority of the hierarchy with the authority of debate and evidence based upon more equal access to information.

The democratisation of communication

Such changes in the structures of social relations and access to knowledge imply parallel changes in the structures of communication in schools. Usually, language is used in schools (as in the wider society) not only as a means of communication but also as a mechanism of control. The unidirectional and acausal language of computer programs has already been noted as such a mechanism. Habermas (1976) has argued that the rationalised structures of contemporary organisational and political life typically give rise to similarly distorted structures of communication. Moreover, as Watkins observes:

> The concept of distorted communications suggests that many organisations actually operate in this vein, veiling power, obscuring issues, manipulating trust and consent, twisting the available knowledge and limiting possibilities. Thus a central thrust of educational administrators should be to correct these unnecessary, disabling distortions, which often reflect the interests of the administrator and powerful interests, rather than those of all organisation members (Watkins 1983, p. 21).

Indeed, if debates over the validity, structure, and interpretation of knowledge were to become central to the curricular structures and pedagogy of schools then transformations of these distortions of authoritarian language would be necessary. As this applies in the classroom it also applies to the administrative personnel of the school. Gronn (1982), for instance, has shown how the language of administration displays distorted forms of language directed towards the maintenance of administrative control. Watkins, in opposition to such usage, argues that part of the process of developing communicative competence in teachers and students alike entails

> an all pervasive democratic interaction [in which] inequalities of power and status are openly debated and argued while dominant, legitimating beliefs, rationalities and ideologies are laid bare and continually criticised (Watkins 1983, p. 21).

The point of such critical communication is not only the improvement of the social and ideological structures that govern our lives, but also, as Wittgenstein (1953) put it, the attempt to escape the bewitchment of our intelligence by the means of language. The democratisation of communication in schools is therefore both an administrative and an educational agenda.

The democratisation of cultural concerns

It is culture that gives meaning to life. As I have suggested elsewhere:

> the beliefs, languages, rituals, knowledge, conventions, courtesies and artifacts — in short the cultural baggage of any group — are the resources from which individual and social identities are constructed. They provide the framework upon which the individual

> constructs his understanding of the world and of himself. Part of this cultural baggage is factual. It is empirical, descriptive, and objective. Another part of this cultural baggage, perhaps the greater part, is mythical. It is concerned not with facts but with *meaning*; that is, the interpretative and prescriptive rules which provide the basis for understanding and action (Bates 1982a, p. 10).

The construction of meaning is a social concern. Even in the 'hard' world of science, as both Toulmin (1972) and Lakatos (1970) emphasise, the creation of meaning out of the unruly data provided by the natural world is a communal affair. Even more so in social and political life, the establishment of those cultural concerns that are mythical — that is, those that celebrate through myth and ritual commitments to various human ideals and social visions of the future — is also a function of community. Thus, as Kerr reminds us:

> While individuals should . . . be free to choose in matters that regard their own destinies, the range of individual choice should be limited by a conception of community. Further, where issues regard what is in the community interest, the choices that are to appear on the ballot should be decided by the community, rather than being decided by an elite group (Kerr 1981, p. 498).

In this respect, we have already argued that the democratisation of work is a fundamental necessity in a just society. Such arguments are closely related to arguments for the enhancement and democratisation of cultural concerns involved in the idea of community. As Kerr again suggests:

> If a sense of community is essential to individuals' developing and enjoying their capacities and abilities, we should also ask, how might work be revamped so as to enhance a feeling of community? (Notice that the point in asking this question here is not to seek ways to increase productivity.) That is, what institutional arrangements would discourage workers from building protective cocoons around themselves with goal displacement and, at the same time, provide common rallying points? (Kerr 1981, pp. 499–500).

If such considerations apply to the world of work, they apply even more strongly to the world of schools for, as we have seen, what comes to count as valid knowledge, valid organisation of knowledge, valid transmission of knowledge, and valid evaluation of knowledge is more properly the result of arguments between research programs, interpretations, and theoretical explanations than it is the result of the management of knowledge for bureaucratic or organisational convenience.

Just as arguments about the validity of scientific knowledge are couched in terms of competition between alternative research programs, so can the validity of cultural concerns be seen as arguments between alternative agendas. Dunn (1982), for instance, suggests that social reforms should be seen as arguments to which similar procedures of examination for validity of cases apply. While, as Habermas (1976) has shown, the conclusiveness of scientific proofs does not apply to arguments in the cultural or social realm, this does not mean that claims to truth about cultural concerns are impossible to achieve. Indeed, there are substantial grounds for believing that arguments over social reforms contain implicit criteria

for the evaluation and judgement of competing claims. But, in such areas, arguments are not settled by appeal to deductive reasoning, rather:

> [The] processes of knowledge production and use are symbolic or communicative actions involving two or more parties who reciprocally affect the acceptance or rejection of knowledge claims through argument and persuasion. Thus, knowledge is not 'exchanged,' 'translated,' or 'transferred,' but transacted by negotiating the truth, relevance, and cogency of knowledge claims (Dunn 1982, pp. 305–6).

Thus, in the area of cultural concerns that shape social arrangements according to beliefs and aspirations, as well as appeal to facts, the fundamental issue is not that of the authority of position but rather democratic access to the community structure within which debate over such issues takes place. As Strike points out, what is needed are:

> ways of collective or public decision-making which give all persons a fair chance to express and pursue their own wants and needs. That the wants and needs of persons have validity entitles them to a right to public institutions which fairly take their wants and needs into account. The validity of the wants and needs of persons thus generates a demand for institutions in which decision-making is democratic (Strike 1982, p. 231).

What all this adds up to is that authoritarian forms of determination of cultural concerns through massive ritualisation of cultural concerns (see Bernstein 1975) or through the expropriation of cultural resources by economic interests (see Mattelart 1979) is unjust and inhibits and distorts the crucial debate over social and cultural concerns. If this is so in the wider society, how much more is it so in schools? For, in placing economic or narrowly vocational concerns at the heart of the curriculum, schools have displaced the essential concerns of what it means to be a person and a citizen — a member of a cultural community. Schools have, as I have argued elsewhere, been deeply involved in an

> administrative destruction of community [which] was historically based upon the de-rationalisation, de-moralisation, and de-politicisation of individuals and the transformation of their social, cultural, psychological, linguistic and political consciousness [by] the hierarchical structures and processes of the institutional society (Bates 1983, p. 35).

If schools have been powerful in their contribution to the administrative destruction of the cultural concerns of community, they also can be powerful in the re-creation of community and the reinstatement of concerns over the personal nature of the relations individuals have with each other, the quality of their shared social life, and the moral claims people have on each other. These issues lie at the heart of a reconstructed educational theory of administration.

Conclusion

The point from which this monograph began was the assertion that, as currently conceived by professional and professor alike, educational administration is a technology of control. Moreover, it is a technology of

administrative control that systematically ignores both educational issues and those social and cultural issues that lie at the heart of people's commitment to, or alienation from, educational institutions. This separation of administrative from educational concerns was shown to have its roots in the coalescence of three social movements: the municipal reform movement, occupational professionalisation, and the cult of efficiency. The integration of these three movements in the United States of America or their counterparts elsewhere was fundamental to the educational settlement that has for the past century dominated public education systems throughout the Western world. This settlement was based upon a variety of factors: the depoliticisation of minority and disadvantaged groups; the amalgamation of small-scale education into large corporate systems; the subjection of such systems to the authority of the educational (business) trust; and the progressive technicisation of educational activities.

The result has been the establishment in education of hierarchical structures of authority and control that both mirror and reproduce the systematic inequalities of the wider society. Educational administration as a technology of control has largely served to reproduce in education the procedures of control by which social and cultural inequalities are reproduced through the administrative control of work in the wider society.

The theoreticians of educational administration, whether they belong to the era of scientific management, the theory movement, or contemporary administrative theory, have justified their approach by appeal to a model of science that seriously misrepresents the nature of scientific activity and to a model of society that exaggerates its consensual order. The inadequacies of the hypothetico-deductive model of positivist science and the positivist, apolitical model of society were argued to be intellectual products that provided the illusions necessary for the continued employment of techniques of hierarchical administrative control that perpetuate the injustices of an unequal society.

The role of schools in perpetuating such inequalities was argued, following Bourdieu, Bernstein, and Bowles and Gintis, to be based upon symbolic violence, the manipulation of educational codes, and the production of behaviour corresponding to that required by the capitalist organisation of work. In particular, the politics, language, and epistemology of bureaucratic forms of educational organisation were argued to contribute to a misleading view of knowledge production, an acausal and unidirectional language, and a theory of society devoid of considerations of justice, equality, and fairness.

Following this analysis of the consequences of the imposition of an administration conceived as a technology of control, several alternatives were presented. Following Kerr, those alternatives examined the relationships between concepts of epistemology and social order underlying Platonic, Aquinian, and Humean models. Following this discussion, a brief account of a more adequate model based upon contemporary moral philosophy and political science was given and its compatibility with contemporary sociology and philosophy of science was noted. In particular, the dialectical nature of the growth of knowledge in both empirical and cultural spheres was noted, as was the insistence on the importance to both of a conception of community.

Finally, the importance of community, a conception of justice, and a

constructivist pluralist approach to epistemology were argued as an appropriate basis for the development of an alternative educational theory of administration and the management of knowledge that stresses the importance of the democratisation of social relations, knowledge, communication, and cultural concerns. Fundamental to such an argument is a concern to develop an educational theory of administration that will serve the purposes of liberation and justice rather than control and inequity, for

> education has fundamental connections with the idea of human emancipation, though it is constantly in danger of being captured for other interests. In a society disfigured by class exploitation, sexual and racial oppression, and chronic danger of war and environmental destruction, the only education worth the name is one that forms people capable of taking part in their own liberation (Connell et al. 1982, p. 208).

A truly educational theory of educational administration and the management of knowledge would be one that served such ends.

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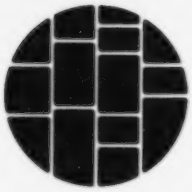
Readings



1 Educational administration, the sociology of science, and the management of knowledge

Richard J. Bates

This article deals with a number of the issues raised in the current debate over the status and nature of theory and research in educational administration. In particular, current controversies and how these relate to similar debates within the philosophy and sociology of science, and ideas from the New Sociology of Education which allow an understanding of the importance of educational administration in the management of knowledge, are discussed.

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Educational Administration as a field of theory and research has never held a particularly high status in the academic community. There are a number of reasons for this, among them the practical nature of the activity (though the same practicality presumably applies to law, engineering, architecture, and medicine); the lack of consensus over theoretical issues (though there has always been a continuing series of controversies in science, humanities, and the arts); the low level of research methodology; and the political nature of the field.

Some of the criticisms of educational administration are just. There often has been a tendency for work in educational administration to be simply a laying on of hands for those who need credentials or a programmatic concern with the maintenance of policies and regulations into which principals and departmental officers are thought to need socializing.

However, there are good grounds for believing that the processes through which learning is organized in society are of central importance in both the production of knowledge, the maintenance of culture, and the reproduction of social structure. Educational administration is a key element in these processes of structuring knowledge and society. It is

concerned very much with the management of the structures of knowledge and the structures of control. It is a human activity of major importance in the reproduction of culture and society.

The sections that follow: (a) outline major areas of difficulty in the understanding of educational administration, (b) discuss various controversial arguments currently being fought out among academics involved in the study of educational administration, (c) show how these arguments follow almost identical arguments in the philosophy of science, and (d) present some ideas from the new sociology of education which allow an understanding of the importance of educational administration in the management of knowledge.

A PLURALITY OF VIEWS

Educational administration is an umbrella term that covers a multitude of ideas and activities representing considerable differences of view between various groups within the profession. Some of these divisions are the result of differences between theorists, who argue that practice cannot properly be understood unless set within the explanatory context of some theory, and practitioners, who argue that abstract theories are largely irrelevant to the hustle and bustle of administrative work. Other differences occur because theoreticians owe allegiance to differing disciplines (sociology, psychology, philosophy, history, or political science) or to differing orientations within these disciplines (classical theory, functionalist theory, behaviorism, human relations theory, or phenomenology). Still more differences occur among practitioners who face a diversity of economic, political, social, and psychological problems related to the differing contexts of their activities.

As a consequence of these multiple and overlapping divisions, the diversity of perspective and opinion within the field of educational administration is perhaps its most overwhelming feature. Such diversity can be regarded as a sign of vitality within a complex professional area. It encourages debate and innovation. It can also be argued, however, that such diversity is much more an indication of the amorphous nature of the field. Erickson,[1] for example, concludes his review of the literature with the comment that the continually shifting agglomerate of ideas within educational administration possesses no particular conceptual unity; there is no generally accepted paradigm which can provide a sense of coherence and direction within the field.

Erickson points to a number of factors which prevent the emergence of a generally agreed upon paradigm. Firstly, there is a focus on peripheral issues such as "a wide range of organizational phenomena . . . the politics and economics of education . . . the socialization of everyone in sight . . . school law, and . . . a constantly shifting agglomerate of other areas."[2]

Secondly, there is the inadequacy of much research in educational administration. Here Erickson repeats Charters' lament of "acres of disjointed, theoretically barren, non-cumulative and downright shoddy studies . . . endless, witless administrations of the LBDQ, OCDQ, POS, ABC, and XYZ scales to haphazard collections of teachers and administrators."[3] Thirdly, there is a general ignorance of research in closely related areas. In particular, the disregard of research on the *organization of instruction*, the lack of attention to task design and *organization in classrooms*, and the almost exclusive focus on the behavior of teachers and administrators rather than on *student outcomes*.

Erickson makes his criticism and his preferences abundantly clear. What he fails to do, however, is to either construct or justify a theory of educational administration based on his assertion of the importance of the organizational characteristics of instruction and classrooms and their impact on students. Until such a theory is developed, the current diffuse preoccupations of educational administrators cannot be adequately challenged.

THE APPEAL TO TRADITIONAL SCIENCE

There is a widely shared awareness of the problems raised by Erickson. The incoherence of theory and the inadequacy of research in educational administration are current topics of debate in the literature. Herda, for example, argues in the course of an examination of the Griffiths-Greenfield debate that:

> *Analysis and synthesis of studies and findings are lacking. Critical discussions are virtually non-existent among the various writers advocating a need for theory in educational administration.*[4]

Hoy argues similarly that:

> *There are virtually no significant programmatic efforts in the study of educational administration. The research is fragmented and lacks a systematic attack on a series of related problems. There is little in the way of replication, improving or building on others' work . . . critical analyses and scholarly exchanges on research are conspicuously absent from the literature.*[5]

The identification of inadequacies in educational administration has led to a growing consensus over the problems of the field. It seems clear that what is needed is more coherent theory and more rigorous research. There is general agreement over Griffiths' suggestion that "it is time for a new paradigm for the study of educational administration. Modern theories are not adequate to describe or predict behavior of people in organizations."[6]

Identification of the problem, however, is only an initial step; agreement on the nature of the problem is no guarantee of agreement over solutions. One of the first difficulties is a major division of opinion over the very

nature of theory in educational administration. On one hand there is a strong defense of the traditional scientific models of theory and research, and on the other hand an attempt to redefine the nature of theory and research on the basis of current radical critiques of theory in traditional science.

The supporters of traditional science in educational administration argue that educational administration has lost its way because of its abandonment of scientific research and its pursuit of the pragmatically relevant issue. Security, respectability, and stability in educational administration can only he achieved, the traditionalists argue, if the traditional model of the natural sciences is strictly adhered to:

> *It is periodically suggested that practice and applied research be emphasized at the expense of scientific research that expands theoretical knowledge. I believe that course is short-sighted and unsound; I believe educational administration as a discipline, can best preserve its own uniqueness by reaffirming its commitment to scientific research.*[7]

By scientific research, Hoy means "the systematic and critical empirical investigation of hypothetical propositions"[8] which is based upon "an assumption that the nature of reality is ultimately material and knowable."[9] Moreover, the scientific educational administrator must eschew immediate pragmatic interests and problems. For scientific research

> *is basically problem generating rather than problem solving. The work of the researcher lies distinctly in exploring problems that are ultimate rather than immediate, and fundamental rather than pragmatic.*[10]

The purpose of research and theory is not, according to Hoy, to solve human problems, but to "understand and explain phenomena."[11] The process by which such understanding is achieved relies on a continuous process of "further testing, further inquiry" by which empirical science guards the products of "honest inquiry" against the "transient ethos of a particular culture where they will erode over the passage of time."[12] Clearly, Hoy holds a model of science, which is based upon the idea of independent reality which is subject to measurement and description, and explicable in terms of theory which can be verified by independent and impartial testing, resulting in propositions and explanations that are free from cultural or historical bias.

Hoy's position is extended by Griffiths to a description of theory as "a set of assumptions from which presuppositions can be deduced by mathematical or logical reasoning."[13] In this, Griffiths echoes Blalock's argument that:

> *Ideally we might hope to achieve a completely deductive theoretical system in which there would be a minimal set of propositions taken as axioms from which all other propositions could be deduced by purely mathematical or logical reasoning.*[14]

The result of such an axiomatic theoretical system is presumably an ability to predict the course of events in organizations, with considerable (even mathematical) precision. The function of research in such a context is presumably limited to the identification and isolation of the fundamental axioms and the testing of predictions against an increasingly explicable reality. The measurement and description of reality and the theoretical unity of the axiomatic structure are also to be evaluated against impersonal, universal criteria agreed upon within the scientific community.

Here lies the first problem. Even for those who agree with Griffiths that "emerging theories will . . . use situations and situational variables as axioms"[15] (whatever that might mean), everything depends upon agreement over the relevance of the fundamental axioms on which the theoretic structure is to be based. The history of educational administration and the diversity of interests, approaches, and theories it exhibits give little cause for optimism that agreement over first principles can be reached.

It is, moreover, somewhat ironic that leading academic educational administrators should embrace traditional science as an impartial arbiter and guide at the very time when the traditional view of science is under increasing attack within scientific,[16] philosophical,[17] and sociological[18] communities.

The image of a coherent and unified natural science, achieved through impartial examination of theoretical approaches to reality which can be checked by objective measurement and observation conducted according to universally accepted criteria of truth and validity, is now regarded by a growing body of critics as a dubious and misleading (indeed, an ideological) view of how science is done. The emerging view challenges each one of these classical assumptions on which the claims of traditional science rest. Mulkay argues, for instance, on the basis of an extensive and careful review of the field, that:

> *Contrary to the standard view, it seems that scientific knowledge is not stable in meaning, not independent of social context and not certified by the application of generally agreed procedures and verification.*[19]

Instead of the traditional view of science, the new critics argue that "the empirical conclusions of science must be seen as interpretative constructions, dependent for their meaning upon, and limited by the cultural resources available to, a particular social group at a particular point in time."[20] That is to say, the theories of science are essentially *constructed* by scientists. They are subject to continual changes of meaning which do not originate solely in the nature of the physical world but do originate at least partly in the social and political context of the scientist's activity. This is most obvious in areas of controversy which are a continual feature of scientific life.

> *All areas of scientific research are characterized by situations in which the established technical culture permits the formulation of several reasonable alternatives, none of which can be shown conclusively to be more correct than another.*[21]

It has been argued by Struthers that "expert consensus is neither a necessary nor a sufficient condition of theoretical validity or usefulness."[22] Feyerabend goes even further in arguing that the continuous creation of alternative theories is necessary for scientific advance:

> *A plurality of theories must not be regarded as a preliminary stage of knowledge, which will at some time in the future be replaced by the One True Theory. Theoretical pluralism is assumed to be an essential feature of all knowledge that claims to be objective.*[23]

The condition of science is, therefore, akin to that of educational administration, at least as far as theoretical pluralism is concerned, and cannot be looked to as a model through which the incoherence of educational administration can be remedied.

A similar argument is put forcibly by Bloor[24] who suggests that:

> *Mathematical formulations and logical principles have no meaning until they are interpreted in terms of non-formal, background assumptions: that these assumptions are socially variable; that mathematical reasoning is, therefore, context dependent and that mathematical proofs are produced by informal processes of social negotiation.*[25]

It looks, therefore, as though the model of traditional science may be an inadequate and misleading, even ideological, representation of the process of science—which is, rather, a process of negotiation between competing claims influenced in its assumptions by social and political factors and subjected to constant amendment and change. These are precisely the characteristics most complained about by critics of educational administration and theory. They are also the characteristics emphasized by supporters of an alternative position—the phenomenologists.

THE PHENOMENOLOGICAL ALTERNATIVE

The phenomenological attack on "traditional science" models of organization in educational administration was launched by Greenfield at the Annual Conference of the American Educational Research Association, New Orleans, 1973, and developed further by him during the International Intervisitation Program of the Commonwealth Council for Educational Administration at Bristol in 1974.

Greenfield argued that "a mistaken belief in the reality of organizations has diverted our attention from human action and intention as the stuff from which organizations are made."[26] In making this assertion, Greenfield appeals to

> *. . . a body of theory and assumption which runs squarely at odds with that which has provided the ideological pinnings of educational administration as it has developed over the past two decades . . . a view which sees organizations not as structures subject to universal laws, but as cultural artifacts, dependent upon the meaning and intention of people within them.*[27]

In claiming allegiance to the phenomenological traditions of European thought, Greenfield is asserting his conviction that the search for universal laws of organization and administration is a search for fools' gold. More than that, however, the phenomenological tradition insists that understanding of social situations (and organizations are clearly social situations) can only be achieved when the meanings and intentions of the individuals involved in them are taken into account. Moreover, meanings and intentions are always in the process of becoming, of being negotiated, by those involved. Thus, "the phenomenological view begins with the individual and seeks to understand his interpretations of the world around him." Therefore, "the aim of scientific investigation is to understand how the construction of reality goes on at one time and place and to compare it with what goes on in different times and places."[28] As a result of the likely diversity such a method will produce, "the hope for a universal theory of organizations lapses into multi-faceted images of organizations as varied as the cultures which support them."[29]

Basic to Greenfield's position is the appreciation that organizational behavior is negotiated in much the same way that it is suggested by the radical critics of scientific theory. That is, people's understanding of organizations is crucially affected by the ideas, "attitudes and experiences we bring to organizations from the wider society in which we live."[30] That is, the structure of organizations provides only a framework within which negotiation is conducted, priorities are formulated, assumptions about ends and means are debated, and ideas from other political and social contexts are adumbrated.

Greenfield sides with a growing body of critics of the dominance of technical rationality in the conduct of human affairs. The argument is clearly put by Bernstein; who suggests that:

> *We are coming to realize that human rationality cannot be limited to technical and instrumental reasons: that human beings can engage in rational argumentation in which there is a commitment to the technical evaluation of the* ***quality*** *of human life: that we* ***can*** *cultivate theoretical discourse in which there is a rational discussion of the conflict of critical interpretations, and practical discourse in which human beings try, not simply to manipulate and control one another, but to understand one another genuinely and work together towards practical, not technical, ends.*[31]

The practical ends to which Greenfield would have us direct attention are rather different from the technical processes and axiomatic structures of the theory advocated by Hoy and Griffiths. Essentially, Greenfield argues

that far from excluding personal values and beliefs from the scientific analysis of organizational behavior, it is impossible to understand organizations without taking them into account. Indeed, it is precisely the values and beliefs of people who form organizations which give organizations their meaning:

> *What many people seem to want from schools is that schools reflect the values that are central and meaningful in their lives. If this view is correct, schools are cultural artifacts that people struggle to shape in their own image. Only in such forms do they have faith in them; only in such forms can they participate comfortably in them.*[32]

The logic of this argument leads to precisely the opposite conclusion of that reached by Hoy, who argued that scientific theory was related to "theoretical knowledge" rather than to the improvement of practice and that the "work of the researcher lies distinctively in exploring problems that are ultimate rather than immediate, fundmental rather than pragmatic."[33] Rather, insist the phenomenologists, there is nothing more ultimate or fundamental in social life than the struggle of individuals to shape institutions in their own image.

In insisting on the importance of a number of questions [such as, Who believes in these (particular) goals? Who believes he knows how to act so as to achieve them? Whose meanings define what it is right to do among people involved here with each other?], Greenfield and his fellow phenomenologists establish a link with certain ideas in the new sociology of education, which is centrally concerned with the ways in which the structures of knowledge articulated within the social systems are shaped by the processes of social interaction—especially those concerned with political issues of power and control.

ON THE MANAGEMENT OF KNOWLEDGE

Earlier in this discussion Erickson's stricture on educational administrators for their ignorance of relevant research in related fields was quoted. This stricture can be extended to ignorance of relevant theory in related fields.

One of the most glaring examples of this blindness to outside research and theory is the ignorance among educational administrators of the revolution that has occurred in the sociology of education during the 1970s. Even Tipton,[34] when examining the uneasy relationship between educational administration and the sociology of education, fails to appreciate the significance of new developments in sociology for educational administration.

The particular significance of the new sociology of education, as it has emerged in England especially, is in its focus on the relationship between

knowledge and control. As a result of the debate initiated by Young[35] and his collaborators, a theoretical appreciation of the relationship between structures of knowledge and structures of control is developing into a coherent and comprehensive theory.[36]

The relationship argued by the proponents of the new sociology of education is that the structures of knowledge within society are closely related to, if they are not derived from, interests of different groups within the social structure. The argument can briefly be summarized as follows:

1. What counts as knowledge in social life is determined by the nature and structure of that social life.
2. The structure of social life is determined by the means of production.
3. The social life of any group is, therefore, differentiated according to the division of labor.
4. The division of labor (at least in capitalist society) leads to the creation of differences in power, thus leading to the creation of a hierarchy and the development of an elite.
5. The exercise of power by the elite both determines and is determined by the division of labor, which is a result of the means of production, which controls the social life and consciousness of men, which *is* what counts as knowledge.[37]

Clearly, this is a complicated argument, but basically it suggests that what counts as knowledge is closely related to the interests and power of social groups. What counts as knowledge in differing groups is different, but what counts as knowledge in schools and formal education systems is determined largely by the interests of the powerful.

The spread of this idea has been the stimulus for a new and critical analysis of the way in which educational and social structures are related. In particular, it has emphasized a number of problems which have previously been "taken for granted."[38]

1. What counts as knowledge?
2. How is what counts as knowledge organized?
3. How is what counts as knowledge transmitted?
4. How is access to what counts as knowledge determined?
5. What are the processes of control?
6. What ideological appeals justify the system?[39]

It can be seen that Erickson's insistence upon the importance of theories of instruction, school effects, classroom organization, and student outcomes can readily be subsumed in this set of theoretically integrated problems.

An analysis of these questions is also crucial to an adequate theory of educational administration. For if educational administration is understood as a technology of control, then analysis of the mechanisms through which

such control is implemented via the structuring of knowledge in schools is a proper basis for the development of a critical theory of educational administration.

The precise nature of such analysis depends upon a great deal of necessary theoretical and empirical work, which as yet shows few signs of being done. The outlines of such a theory might, however, be somewhat akin to the following argument which relates the two broad categories of knowledge and control in a theory of the management of knowledge.

STRUCTURES OF KNOWLEDGE

What Counts as Knowledge?

The significance of this question lies in the assertion that knowledge is assessed and constructed differently by different groups.[40] Thus, what counts as knowledge for one social group is different from what counts as knowledge for others. The essential point is that the experience and, therefore, the interests of these groups differ, and, subsequently, the knowledge which is of most importance to them in their everyday lives also differs.

Moreover, the epistemologies, or tests for truth, employed by differing groups may also differ. Some regard knowledge as equivalent to an independent reality (the correspondence theory); others regard assertions as knowledge if they fit in with what is previously known (the coherence theory); still others say that knowledge is what works or is useful in a given situation (the utilitarian or relativist theories).

There are obvious and widespread conflicts in society over knowledge and what shall count as knowledge. Some of these impinge on the curriculum of the schools.

Currently, there are obvious differences within the community over what counts as knowledge in social studies (the MACOS debate), English (the media studies debate), human relations (the sex in schools debate), and math (the new math debate). What we have no detailed idea of is what counts as knowledge in classrooms and how this relates to the characteristics of teachers, children, or local and national communities.

To say that such differences occur within the wider society is not to argue that they are inevitably translated into the life of the schools. Clearly, two major factors influence the process: firstly, the policy of educational authorities embodied in official guidelines and activities; secondly, the actual definitions held by teachers and retailed, as it were, in classrooms. It may be that the actual curriculum is differentiated subtly between social class groups, as is suggested by Davies and Corbishley.[41] Similarly, it may be argued that differing definitions of what is to count as knowledge are

likely to lead to impasse in the classroom.[42]

The importance of such questions for educational administrators lies in their ability to differentiate out various political constituencies which support particular definitions of knowledge. As Baldridge[43] suggests, a political model of education is fundamental to understanding processes of knowledge and administration. That this applies not only to the allocation of monetary resources, but also to the definitions of what is to count as knowledge is a fact of considerable importance in our understanding of administrative processes in education.

How is What Counts as Knowledge Organized?

The second assertion of the new sociology of education is that knowledge is organized on an institutional basis. Thus, certain kinds of knowledge become the relatively exclusive preserve of certain institutions which dominate and control the extension and application of that knowledge. The classic cases most frequently cited are those of professional groups such as doctors and lawyers. The principle, however, extends into a much wider variety of institutions, the most important of which are probably governmental and large multi-national corporations. The key principle of organization involved here is the distinction between public (i.e., widely accessible) and private (i.e., restricted) knowledge. This involves the issue of right-to-know as against governmental and commercial interests in secrecy.

Almost by definition, the knowledge retailed by schools is public knowledge. Its organization within schools is, moreover, subject to the supervision of public bodies, including departments of education, advisory groups, church authorities, curriculum study groups, examination boards, and textbook publishers, all of whom operate within the public domain.

For the most part, however, what counts as knowledge in schools is hierarchically organized, one particular unit of knowledge needing to be mastered before others are attempted. Along with such principles of public knowledge and hierarchy, other means of organizing knowledge within schools occur, which parallel those in the wider society. For instance, divisions of knowledge between arts, science, and social studies are common. Some schools organize programs within or between these areas on an integrated basis. Other schools maintain strong boundaries between them.[44] There are also indications that bureaucratic structures require knowledge within schools to be compartmentalized, hierarchicalized, and systematized in keeping with procedures of bureaucratic structures in general.[45]

The principles of organization employed in various types of administrative structure and the codes learned as a result of such devices are argued to

differentiate the culture of various groups in significant ways.[46] Thus, study of the ways in which the organization of knowledge is influenced through various structures of administration leads to an awareness that the social organization of knowledge is an important element of the commonsense understanding which is created among children during schooling. What needs to be explained is in what ways such organization is different for different groups within and between schools, and the results of such differences for the understanding achieved and internalized by pupils with differing cultural backgrounds and futures.[47]

Once again, the administrative process in education is seen to have profound implications for the structuring of human understanding through the structuring and organization of knowledge.

How is What Counts as Knowledge Transmitted?

The procedures by which knowledge is transmitted very clearly differ according to the kinds of knowledge involved and the principles of organization. For instance, certain kinds of knowledge are seen to be relevant to very restricted numbers of individuals. The procedures of transmission used reflect the definitions of applicability. For instance, knowledge of certain political, artistic, sporting, and other major events are widely reported in the mass media. This form of transmission, as McLuhan[48] suggested, is cool and transitory in its communication of content. In other words, the content of what is transmitted is less important than the ritual involved in its communication; meaning is often nearly redundant; the massage is more important than the message.

Other forms of transmission are, in McLuhan's terms, hot, like books and performance, where the receiver has to be active in a process of understanding. Typically, the meaning transmitted through such means is elaborated rather than redundant, explicit rather than ritualistic.

These two forms of transmission imply, and are used for, different purposes. Rituals are a condensed and redundant form of communication, but they are powerful tools of social control. As Bernstein, Elvin, and Peters[49] suggest, rituals are often employed in schools, both as a means of consolidating the social order and keeping the school together, and as a means of discriminating between groups. On the other hand, the more explicit forms of transmission of knowledge are less related to social and more to individual interests.

These processes of transmission seem to be related to deductive and inductive processes of learning in classrooms. What the use of a particular transmission procedure implies, especially, is either a passive or an active stance on the part of the learner. Thus, an important lesson, not about content or organization, but about one's stance towards the world is being

learned. The implications of this for procedures of social control are considerable. The forms of transmission encouraged or enforced by certain styles of administration in education are also, therefore, central in understanding the effects of schooling. The relationship between administrative structure and the transmission of knowledge may be direct or indirect, but it is clearly significant.

It can be seen from the argument outlined above that questions of what counts as knowledge, how it is organized, and how it is transmitted are intimately linked, both theoretically and in practice. They are clearly crucial in the assessment and examination of the ways in which knowledge is structured in educational organizations. They are also clearly much influenced by the administrative procedures through which such questions are resolved for systems, schools, and classrooms.

STRUCTURES OF CONTROL

If knowledge is selected, organized, and transmitted in particular and demonstrable ways in educational settings, it is crucial to our understanding of education that we develop a means of assessing the ways by which particular arrangements are arrived at. In this, we need to focus on three further questions which allow the concentration of attention on critical interpenetrations of educational and social influences in the life of educational systems. These are questions of access, power, and justification.

How is Access to Knowledge Determined?

In the wider society, access to knowledge of specific kinds is increasingly linked to membership of institutions, whether they be professional, governmental, or commercial. The means of information production, storage, and transmission are increasingly controlled by such institutions, which alone have the resources—such as computers, satellites, or sufficient personnel—which enable such wide ranging collection and manipulation of information. This being so, access is likely to be increasingly restricted to those with positions in such institutions. Thus, the relationship between knowledge and position is accentuated.

This is no new relationship, of course; neither is the function of education systems in excluding individuals from access to such positions through the processes of examination and credentialism new. It is the conflict between the demands for access and for restriction of access through the sorting processes of education which lies at the heart of the debate over pass rates in school examinations. The conventional levels of pass rates are essentially, like social class, a means of exclusion—firstly,

exclusion from further education; secondly, exclusion from certain employment; and, therefore, exclusion from particular social statuses. Access is, therefore, denied and restricted through such "gating" processes.

Educational administrators, in their employment of devices such as tracking, banding, or streaming and their influence over curriculum opportunities and the techniques of assessment and evaluation, have a critical impact on differential access to knowledge within schools and, subsequently, within wider social populations. The study of the ways in which decisions are made over (a) the nature of the hurdles to be erected, (b) the rates of success allowed, and (c) the gating or channeling mechanisms to be employed, is an important component in the construction of a theory of administrative effects on schooling.

What are the Processes of Control?

The preceding discussion leads to a consideration of the ways in which control over content, organization, transmission, and access is exercised. The taken-for-granted answer is that Departments of Education, responsive to the political process via Ministers, are in control of what happens in schools. This is, again, true as far as it goes. The question that needs to be asked, however, is in what ways are departments and ministers, or in other school systems, school superintendents and their boards, influenced in their decisions and priorities? In whose interest do they act?

For many years, we have been persuaded that politics should be kept out of education, and education out of politics. During this period, there has been an apparent coincidence of interests between the various groups. For instance, the need of the industrial system for more workers with a well-educated and skilled background in order to exploit new technologies of production, communication, and control has coincided with the aspirations of working classes for upward mobility for their children. Currently, however, the need for skilled and highly educated operators sppears to be reducing, while supply continues to grow. Thus, the interests of two groups are diverging.

In this situation, one would expect pressures for a reduction in educational expenditure, a raising of the hurdles to reduce the flow of prospective aspirants to the established professions, and moves toward greater control over the content of education. Trends of this kind are readily apparent in most Western countries. The pressure of economic interests and the need to balance the budget (i.e., to transfer funds from education to other more "productive" areas) are effected in the widespread pressure on education finance. Similarly, professional groups such as doctors, lawyers, and architects are attempting to reduce intakes into university schools. Thirdly, public mass media pressure is mounting over the content and standards of the school curriculum and the evaluation

processes used. Thus, the "state apparatus" is responding to the economic power of capital, the professional power of established groups, and the political power of the mass media.

Administrators are more influenced than most by these pressures. It is surprising, therefore, that as a group they have developed so few convincing explanations of the causes or the effects of such control processes. For the most part, administrators have contented themselves with devising coping strategies. Similarly, theorists of educational administration have been concerned with devising management strategies which will be of assistance to practitioners in difficult situations. Explanations of the ways in which power conflicts result in particular decisions are hard to come by. Even more rare are theories which would allow administrators not simply to cope with but rather to influence decision making within the power structures influencing education. Such explanations are necessary as a part of a theory of educational administration based on the considerations of knowledge and control.

What Ideology Justifies the System?

Such considerations lead directly to an analysis of the ideological constraints on, and the justifications of, educational policy. Few sophisticated examinations of ideological influences on educational policy have been undertaken. Renwick's[50] distinction between need and desert as the basic categories distinguishing contemporary ideologies in education is useful. There are, however, subtle distinctions of view within these categories. For instance, there are two theories of desert, the first being based upon the meritocratic principle, where it is argued that IQ plus effort equals merit and merit deserves reward. There is also a second and stronger version of this philosophy which protests a form of social and educational Darwinism, where restrictive and competitive conditions in education are said to serve a useful function in that they ensure survival of the fittest.

The doctrine of distribution according to need also separates into a weak form closely allied to the meritocratic view but inclusive of an optimistic element. This view, I label opportunism. It insists that, given equal access to education, the talents of the socially disadvantaged will assert themselves, and social equality will gradually be achieved through the equalization of opportunity. The stronger form of the argument according to need, which I call interventionism—where equality of opportunity is not enough—is when equality of results through massive redistribution of resources is advocated.

The conflict between these ideological positions can be seen as related to the interests of particular groups. It can be seen, for instance, that ideologies of desert in either the meritocratic or social Darwinist senses

correspond closely with the interests of dominant groups. On the other hand, the doctrine of need in either opportunistic or interventionist forms coincides with the interests of the disadvantaged.

The question of the ideological justification of alternative educational policies is of crucial importance to educational administrators. For it is ideology which either justifies or significantly limits the arbitrary exercise of power in education systems. Ideology specifies the nature of the relationship between structures of knowledge and structures of control which are acceptable as a basis for particular forms of educational administration.

CONTROVERSY IN EDUCATIONAL ADMINISTRATION

This discussion began with a review of contemporary analyses of theory and research in educational administration. They were uniformly pessimistic, complaining of incoherence, incompatibility, and triviality. Remedies for the situation proposed by advocates of traditional science as a model for the renewal of educational administration were examined. They were rejected on the grounds that current critiques of traditional science by a growing body of scientists, philosophers, and sociologists led to serious doubt over the validity of many of the assumptions incorporated in the model. Indeed, the discontinuity between the ideology and the practice of traditional science was pointed to as a convincing reason for rejecting traditional science as an appropriate model for a reinvigorated theory of educational administration.

The similarity of phenomenological assumptions with the assertions of the radical critics of traditional science was noted, as was the appropriateness of these assumptions for an educational theory of administration, which included values as an essential component of the theory and incorporated consideration of political and social differences in approaches to educational organization.

Subsequently, the arguments of the new sociology of education were presented as a comprehensive account of the relationship between structures of knowledge and structures of control and as having considerable relevance to the development of a theory of educational administration.

It was argued that a theory of educational administration, based on the consideration of the relationship between structures of knowledge and structures of control, is capable of providing a source for the analysis of many current issues. In particular, the issue of accountability, which increasingly dominates educational discussion, can be seen to address precisely those issues which are central to the proposed theory. For accountability is about the relationship between knowledge and control. It is about the ways in which control shall be exercised over education and the

selection, organization, and transmission of knowledge. It is about access to, and control and justification of, particular structures of educational administration. It is about whose interests shall be served through the processes of education.

These are matters of considerable moment. They are also matters which cannot be adequately understood on a piecemeal basis. Thus, the development of a comprehensive paradigm, which allows the integration of diverse issues in educational administration, is a matter of urgent necessity. It seems likely that a critical social theory, focused on the fundamental question of the relationships which exist between structures of knowledge and structures of control, is most likely to provide the groundwork for such a comprehensive analysis. In this way, the significance of educational administration in the management of knowledge is likely to be both acknowledged and explained.

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R. J. Bates, "Educational administration, the sociology of science, and the management of knowledge," *Educational Administration Quarterly*, Vol. 16, No. 2 (Spring 1980), pp. 1–20. Copyright © 1980 by Sage Publications, Inc. Reprinted by permission of Sage Publications, Inc.

2 Open schools—open society?

Basil Bernstein

There has been much talk among sociologists concerned with education about the possibilities of analysing the school as a complex organization. The approach to current changes in the structure of the contemporary school system, which I attempt in this article, was initially set out by Durkheim over seventy years ago in his book, *The Divisions of Labour*. I shall interpret the changes in terms of a shift of emphasis in the principles of social integration—from 'mechanical' to 'organic' solidarity. Such changes in social integration within schools are linked to fundamental changes in the character of the British educational system: a change from education in depth to education in breadth. I shall raise throughout this article the question of the relationship between the belief and moral order of the school, its social organization and its forms of social integration.

The concepts, mechanical and organic solidarity, can be used to indicate the emphasis within a society of one form of social integration rather than another. Organic solidarity is emphasized wherever individuals relate to each other through a complex inter-dependence of specialized social functions. Therefore organic solidarity presupposes a society whose social integration arises out of *differences* between individuals. These differences between individuals find their expression becomes crystallized into *achieved* roles. Mechanical solidarity is emphasized wherever individuals share a common system of belief and common sentiments which produce a detailed regulation of conduct. If social roles are achieved under organic solidarity, they are *assigned* or 'ascribed' under mechanical solidarity.

Wherever we have mechanical solidarity, according to Durkheim,

punishment is necessary in order to revivify shared values and sentiments; i.e. punishment takes on a symbolic value over and beyond its specific utilitarian function. The belief system is made palpable in the symbolization of punishment. Durkheim took what he called repressive (criminal) law as an index of mechanical solidarity.

Under conditions of organic solidarity, the concern is less to punish but more to reconcile conflicting claims. Social control, in conditions of organic solidarity, is concerned with the relationships between *individuals* which have in some way been damaged. Durkheim took what he called restitutive law (civil) as his index of organic solidarity. Here the system of social control becomes restitutive or reparative in function. Whereas under mechanical solidarity, individuals confront one another indirectly, their confrontation being mediated by the belief system—under organic solidarity, in situations of social control, the belief system recedes into the background and the individuals confront one another directly.

Mechanical solidarity, according to Durkheim, arises in what he called a segmental society. He meant by this a type of society which could lose much of its personnel without damage to its continuity. Organic solidarity would correspond to the differentiated society, with diverse specialization of social roles; consequently the loss of a particular group of specialists might seriously impair the society. One can infer that segmental societies would make clear distinctions between inside and outside; whereas in differentiated societies the boundaries, as all symbolic boundaries, between inside and outside would become blurred.

Durkheim argued that a secondary cause of the division of labour arose out of the growing indeterminacy of the collective conscience (the value system). He said that sentiments would be aroused only by the infringement of highly general values, rather than by the minutiae of social actions. This, he said, would give rise to wider choice and so would facilitate individualism.

Organic solidarity refers to social integration at the level of individualized, specialized, interdependent social roles, whereas mechanical solidarity refers to social integration at the level of shared beliefs. Under mechanical solidarity, there would be little tension between private beliefs and role obligations. In organic solidarity, the tensions between private belief and role obligations could be severe. This tension might be felt particularly by those

individuals in socializing roles—for example, parents, teachers, probation officers, psychiatrists.

This is the shift of emphasis in the principles of social integration in schools—from mechanical to organic solidarity—that I shall be talking about. I am not concerned whether all the relationships I refer to are factually present in all schools. Clearly, some schools will have shifted not at all, others more; the shift may be more pronounced in the education of special groups of pupils or within different subjects. I am interested only in the general movement which at the moment may exist at the ideological rather than the substantive level. However, the list of shifts in emphasis may form a measure or scale of the change in the principles of social integration.

Consider, first, the forms of social control. In secondary schools there has been a move away from the transmission of common values through a ritual order and control based upon position or status, to more personalized forms of control where teachers and taught confront each other as individuals. The forms of social control appeal less to shared values, group loyalties and involvements; they are based rather upon the recognition of differences between individuals. And with this there has been a weakening of the symbolic significance and ritualization of punishment.

Look now at the division of labour of the school staff. Irrespective of the pupil/teacher ratios, the staff is now much larger. The division of labour is more complex from the point of view of the range of subjects taught. Within the main subjects, the hierarchy of responsibility has become more differentiated. The teacher's role itself has fragmented to form a series of specialized roles (vocational, counselling, housemaster, social worker and so on). Still within the broad category of the division of labour consider—very briefly, for the moment—the organization of pupils. The pupils' position in the new schools in 'principle' is less likely to be fixed in terms of sex, age or IQ, for ideally their position, within limits, is achieved in terms of their individual qualities.

Thus we find (a) a movement towards a more complex division of labour among the staff and a greater differentiation of the teacher's role; and (b) at the same time, the pupils' relationships with other pupils in principle arise from their expression of their educational differences. This is good evidence of a shift towards organic solidarity.

Let us turn, next, to shifts in emphasis in the curriculum, pedagogy, the organization of teaching groups and teaching and pupil roles. Here we are at the heart of the instrumental order of the school: the transmission of skills and sensitivities.

Take the organization of teaching groups first. Here we can begin to see a shift from a situation where the teaching group is a fixed structural unit of the school's organization (the form or class), to secondary schools where the teaching group is a flexible or variable unit of the social organization. The teaching group can consist of one, five, twenty, forty or even 100 pupils and this number can vary from subject to subject. At the same time there has been an increase in the number of different teaching groups a pupil of a given age is in. The form or class tends to be weakened as a basis for relation and organization.

One can raise the level of abstraction and point out that space and time in the new schools—relative to the old—have (again within limits) ceased to have fixed references. Social spaces can be used for a variety of purposes and filled in a number of different ways. This potential is built into the very architecture.

Now for the changes in pedagogy. There is a shift—from a pedagogy which, for the majority of secondary school pupils, was concerned with the learning of standard operations tied to specific contexts—to a pedagogy which emphasizes the exploration of principles. From schools which emphasized the teacher as a solution-giver to schools which emphasize the teacher as a problem-poser or creator. Such a change in pedagogy (itself perhaps a response to changed concepts of skill in industry) alters the authority relationships between teacher and taught, and possibly changes the nature of the authority inherent in the subject. The pedagogy now emphasizes the *means* whereby knowledge is created and principles established, in a context of self-discovery by the pupils. The act of learning itself celebrates choice.

But what about the curriculum? I mean by curriculum the principles governing the selection of, and relation between, subjects. We are witnessing a shift in emphasis away from schools where the subject is a clear-cut definable unit of the curriculum, to schools where the unit of the curriculum is not so much a subject as an *idea*—say, topic-centred inter-disciplinary enquiry. Such a shift is already under way at the university level.

Now, when the basis of the curriculum is an idea which is supra

subject, and which governs the relationship between subjects, a number of consequences may follow. The subject is no longer dominant, but subordinate to the idea which governs a particular form of integration. If the subject is no longer dominant, then this could affect the position of teacher as specialist. His reference point may no longer be his subject or discipline. His allegiance, his social point of gravity, may tend to switch from his commitment to his subject to the bearing his subject has upon the *idea* which is relating him to other teachers.

In the older schools, integration between subjects, when it existed, was determined by the public examination system, and this is one of the brakes on the shift I am describing. In the new schools, integration at the level of idea involves a new principle of social integration of staff: that of organic solidarity. This shift in the basis of the curriculum from subject to idea may point towards a fundamental change in the character of British education: a change from education in depth to education in breadth.

As a corollary of this, we are moving from secondary schools where the teaching roles were insulated from each other, where the teacher had an assigned area of authority and autonomy, to secondary schools where the teaching role is less autonomous and where it is a shared or co-operative role. There has been a shift from a teaching role which is, so to speak, 'given' (in the sense that one steps into assigned duties), to a role which has to be *achieved* in relation with other teachers. It is a role which is no longer made but *has to be made*. The teacher is no longer isolated from other teachers, as where the principle of integration is the relation of his subject to a public examination. The teacher is now in a complementary relation with other teachers at the level of his day-by-day teaching.

Under these conditions of co-operative, shared teaching roles, the loss of a teacher can be most damaging to the staff because of the interdependence of roles. Here we can begin to see the essence of organic solidarity as it affects the crucial role of teacher. The act of teaching itself expresses the organic articulation between subjects, teachers and taught. The form of social integration, in the central area of the school's function, is organic rather than mechanical.

How is the role of pupil affected? I said that, under mechanical solidarity, social roles were likely to be fixed and ascribed, aspirations would be limited, and individuals would relate to each other

through common beliefs and shared sentiments. These beliefs and sentiments would regulate the details of social action. In the older secondary schools, individual choice was severely curtailed, aspirations were controlled through careful streaming, and streaming itself produced homogeneous groups according to an imputed similarity in ability. The learning process emphasized the teacher as solution-giver rather than problem-poser. The role of pupil was circumscribed and well defined.

Now there has been a move towards giving the pupil greater choice. Aspirations are likely to be raised in the new schools, partly because of changes in their social organization. The learning process creates greater autonomy for the pupil. The teaching group may be either a heterogeneous unit (unstreamed class) or a series of different homogeneous units (sets) or even both. The pupil's role is less clearly defined. Of equal significance, his role conception evolves out of a series of diverse contexts and relationships. The enacting of the role of pupil reveals less his similarity to others, but rather his difference from others.

I suggested earlier that, where the form of social integration was mechanical, the community would tend to become sealed off, self-enclosed, and its boundary relationship would be sharply defined. Inside and outside would be clearly differentiated. These notions can apply to changes both within the school and to its relation to the outside.

Schools' boundary relations, both within and without, are now more open. This can be seen at many levels. First of all, the very architecture of the new schools points up their openness compared with the old schools. The inside of the institution has become visible. Of more significance, the boundary relation between the home and school has changed, and parents (their beliefs and socializing styles) are incorporated within the school in a way unheard of in the older schools. The range and number of non-school adults who visit the school and talk to the pupils have increased. The barrier between the informal teenage subcultures and the culture of the school has weakened: often the non-school age group subculture becomes a content of a syllabus. The outside penetrates the new schools in other fundamental ways. The careful editing, specially for schools, of books, papers, films, is being replaced by a diverse representation of the outside both within the library and through films shown to the pupils.

Within the school, as we have seen, the insulation between forms and between teaching roles has weakened, and authority relationships are less formal. The diminishing of a one-to-one relation between a given activity, a given space and a given time—i.e. flexibility—must reduce the symbolic significance of particular spaces and particular times. The controls over flow in the new schools carry a different symbolic significance from the controls over flow in the old schools.

Let me summarize at a more general level the significance of these shifts of emphasis. There has been a shift from secondary schools whose symbolic orders point up or celebrate the idea of purity of categories—whether these categories be values, subjects in a curriculum, teaching groups or teachers—to secondary schools whose symbolic orders point up or celebrate the idea of mixture or diversity of categories. (These concepts have been developed by Mary Douglas in her book, *Purity and Danger*.) For example:

(1) The mixing of categories at the level of values. Changes in the boundary relationships between the inside and the outside of the school lead to a value system which is more ambiguous and more open to the influence of diverse values from outside.

(2) The mixing of categories at the level of curriculum. The move away from a curriculum where subjects are insulated and autonomous, to a curriculum which involves the subordination of subjects and their integration.

(3) The mixing of categories at the level of the teaching group. Heterogeneous rather than homogeneous teaching groups and differentiated sets of pupils rather than fixed forms or classes.

The secondary schools celebrate diversity, not purity. This may be symptomatic of basic changes in the culture of our society, particularly changes in the principles of social control. Until recently the British educational system epitomized the concept of purity of categories. At the apex of the system sat the lonely, specialized figure of the arts Ph.D., a dodo in terms of our current needs.

There was also the separation of the arts and the sciences, and within each the careful insulation between the 'pure' and the 'applied'. (Contrast all this with the United States.)

The concept of knowledge was one that partook of the 'sacred':

its organization and dissemination was intimately related to the principles of social control. Knowledge (on this view) is dangerous, it cannot be exchanged like money, it must be confined to special well-chosen persons and even divorced from practical concerns. The forms of knowledge must always be bounded and well insulated from each other; there must be no sparking across the forms with unpredictable outcomes. Specialization makes knowledge safe and protects the vital principles of social order. Preferably knowledge should be transmitted in a context where the teacher has maximum control or surveillance, as in hierarchical school relationships or the university tutorial relation. Knowledge and the principles of social order are made safe if knowledge is subdivided, well insulated and transmitted by authorities who themselves view their own knowledge or disciplines with the jealous eye of a threatened priesthood. (This applies much more to the arts than to the sciences.)

Education in breadth, with its implications of mixture of categories, arouses in educational guardians an abhorrence and disgust like the sentiments aroused by incest. This is understandable because education in breadth arouses fears of the dissolution of the principles of social order. Education in depth, the palpable expression of purity of categories, creates monolithic authority systems serving élitist functions; education in breadth weakens authority systems or renders them pluralistic, and it is apparently consensual in function. One origin of the purity and mixing of categories may be in the general social principles regulating the mixing of diverse groups in society. But monolithic societies are unlikely to develop education in breadth, in school systems with pronounced principles of organic solidarity. Such forms of social integration are inadequate to transmit collective beliefs and values.

It might now be helpful to drop the terms mechanical and organic solidarity and refer instead to 'closed' and 'open' schools.

Individuals, be they teachers or taught, may be able (under certain conditions) to make their own roles in a way never experienced before in the public sector of secondary education. But staff and students are likely to experience a sense of loss of structure and, with this, problems of boundary, continuity, order and ambivalence are likely to arise. This problem of the relationship between the transmission of belief and social organization is likely to be acute in largescale 'open' church schools. It may be that the open school with its organic modes of social integration, its

personalized forms of social control, the indeterminacy of its belief and moral order (except at the level of very general values) will strengthen the adherence of the pupils to their age group as a major source of belief, relation and identity. Thus, is it possible that, as the open school moves further towards organic solidarity as its major principle of social integration, so the pupils may move further towards the 'closed' society of the age group? Are the educational dropouts of the fifties to be replaced by the moral dropouts of the seventies?

None of this should be taken in the spirit that yesterday there was order; today there is only flux. Neither should it be taken as a long sigh over the weakening of authority and its social basis. Rather we should be eager to explore changes in the forms of social integration in order to re-examine the basis for social control. This, as Durkheim pointed out decades ago, is a central concern of a sociology of education.

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3 School knowledge and the structure of bureaucracy

Andrew Wake

This paper explores limitations placed upon habitual ways of understanding by the structural imperatives of a formal organization. Put differently, I am attempting to analyze the ways in which whatever counts as "knowledge" is defined, structured, and presented as a consequence of its connections with the bureaucratized school, or in Basil Bernstein's words: "How are forms of experience, identity and relation evoked, maintained and changed by the formal transmission of educational knowledge and sensitivities?"[1] In answer to his own question, Bernstein looks at the common "codes" frequently used for constructing the content of school curricula (i.e. school knowledge) into collectivities. The two basic types are the "collection" code where the contents are clearly bounded and insulated from each other, and the "integrated" code where the contents stand in an open relationship to each other.

According to Bernstein, the "closed" or collection code, more commonly found in European schools, defines "subjects" (the content units of a curriculum) as collectivities of information, beliefs, and methods of enquiry usually known as disciplines such as Physics, Mathematics, or History. In schools of this type, students are initiated into these forms of thought and awareness to the extent that many of them come to think of themselves as "Physicists," "Mathematicians," or "Historians."

In contrast to the closed collection code, Bernstein describes the integrated type as characterized by relatively weak boundaries between the units of content. The integrated code is more commonly found in the United States whilst in the United Kingdom there is movement away from strongly bounded codes toward the more integrated variety.

Bernstein recognizes an association between the political structure of the social system and the code under which the curriculum contents are organized; he finds that "the European form of the collection code is rigid, differentiating and hierarchical in character; highly resistant to change, particularly at the secondary level. Under the English version, resistance to change is assisted by discretionary powers available to headmasters and principals."[2]

Additionally he finds that

> . . . collection codes increase the discretion of teachers (within always, the limits of the existing classification and frames) whilst integrated codes will reduce the discretion of the teacher in direct relation to the strength of the integrated code (number of teachers co-ordinated by the code). On the other hand, it is argued that the increased discretion of the teachers within collection codes is paralleled by *reduced* discretion of the pupils and that the reduced discretion of the teachers within integrated codes is paralleled by *increased* discretion of the pupils. In other words, there is a shift in the balance of power, in the pedagogical relationship between teacher and taught.[3]

Reduced to bare essentials, Bernstein argues that there is a parallel relationship between the structure of the organization and the structure of knowledge; collection codes based upon clearly delineated boundaries parallel hierarchical social relationships with clearly defined duties and responsibilities. On the other hand, integrated codes with less rigid boundaries between subjects or course content tend to be associated with less tightly defined social relationships and correspondingly greater freedom for the learner. Bernstein does not explore the further implication that the structure of knowledge in formally organized, hierarchic social institutions (i.e. bureaucracies) tends to take on many of the same characteristics as the bureaucracy.

Approaching the same, or closely related, problem from a completely different direction, Berger, Berger and Kellner,[4] ask "What is the cognitive style of bureaucratic consciousness?" In answer, the authors find the overriding element to be *orderliness* — an orderliness manifested by a propensity to create taxonomic hierarchies. This hierarchic classification, or structuring, requires that "knowledge" be divisible into categories — hence *componentiality* is a feature of bureaucratically organized knowledge; this classification is not necessarily based upon structures immanent within "knowledge" itself but reflects a high degree of arbitrariness; this characteristic is not untrammelled, as there is also a major concern for legal-rational norms (a term not used by the authors but suggested by their use of *justice*) — the same general expectation produces the specific appearance of *predictability*. Contradictions within this procedure are resolved by a high level of *explicit abstraction* which treats individual cases according to a generalized rule. Of the remaining characteristics, *moralized anonymity* refers to the organizational attitude towards the client and *passivity* refers to the client's relationship to the organization.

Knowledge in the Organization

The Berger, Berger and Kellner analysis is partly a phenomenological account of how the clients of bureaucratic organizations typify or thematize the taken-for-granted stock of knowledge at hand. The analysis is incomplete; there are further aspects of institutionalized knowledge, particularly as interpreted by school administrators imbued with bureaucratic consciousness.

Administrators in higher office make many of their day-to-day decisions based upon information provided by others, usually subordinates from the middle level. The information processing and decision-making school of administration theory[5] is built around this phenomenon. Little comment has been made upon the way in which knowledge is presented to and understood by those who occupy middle-level positions along the "staff" or "line" of the school organization. For these individuals maintaining the structure of the organization is an overriding consideration. Without this structure there is no way of locating themselves in social space — no way of knowing where they have been or where they are going. Maintaining the integrity of the organization in terms of its knowledge base assumes enormous importance.

If what counted as knowledge changed from time to time in an unpredictable or random way, then school administrators would find many routine tasks, such as scheduling classes, inordinately difficult. Hence the components into which knowledge is divided must be relatively permanent. Also, as Bernstein pointed out, many teachers like to be known by their connections with some specialized form of knowledge. Hence the characteristic of *componentiality* or divisibility of knowledge into units according to actual or imagined differences in content is often a somewhat arbitrary response to organizational needs. This is especially noticeable under the more rigid collection

codes where the structural imperatives of the organization assign knowledge to divisions that students and teachers are required to accept as distinctive forms of thought and awareness. Although Hirst[6] has argued that these forms are immanent within the discipline, Jenks[7] has taken the opposite position.

Schools traditionally disseminate knowledge generated by other institutions but frequently in a substantially modified form. The categories of knowledge employed by the social institutions of the larger society are rarely identical with those employed within bureaucratized schools. These modifications are not necessarily determined by the structure of knowledge immanent within the discipline concerned.

Common justifications for substantial modifications in the structure of school knowledge are usually based on the necessity of pedagogical practice, the needs of children, or organizational expediency. At the time of writing there does not seem to be any clear pedagogical justification for categorizing knowledge one way rather than another.

The overriding considerations seem to be facilitating the administrative tasks of processing students and maintaining the structure of the organization. Many theories on education assume that children need to have their intellectual energy or interests guided into fruitful directions. When these theories are translanted into practical advice to teachers, a major question arises over whether the overriding considerations in classifying and framing learning experiences are organizational needs — where the organization is thought of as part of a system of interlocking institutions — as opposed to human needs thought of as the development of understanding in the interests of freedom. In bureaucratized schools, institutional needs tend to dominate. That is, knowledge is treated as if it were composed of units that can be organized into systems of ordered parts.

Componentiality by itself does not ensure the orderly and efficient running of the school; there are other constraints placed upon the structuring of knowledge that arise largely from the organizational need to disseminate knowledge in a systematic and orderly way so that predetermined ends are achieved by rationally determined means.

Stratification and Knowledge

The stratification of knowledge acquires greatest significance when it is related to the socio-economic status of the pupil. Keddie[8] provides examples of the "knowledge" available to children from lower socio-economic groups being discounted whilst "knowledge" available to middle-class children is favoured. Some teachers manage classrooms so that students whose vocabulary and grammar do not conform to the middle-class norms of "correctness" or "niceness" are seriously disadvantaged in competition with middle-class children. In the United Kingdom where great attention is paid to speech patterns and social class, the deprecation of working-class speech is a powerful weapon in regulating the behaviour of children. Examinations and standardized tests are usually formulated in the speech patterns of the professional middle-class thereby placing the working-class child at a double disadvantage — both the instructions and the test items are written in the same unfamiliar argot. In the United States the use of non-standard English is often taken as a sign of a learning handicap.[9] The patterning of spoken or written communication contributes to the stratification of knowledge, but so also does the content. Knowing how to speak "correctly" is useful but knowing what to speak about is also advantageous.

What topics are considered suitable or appropriate for discussion inside the formally organized school? Young[10] argues that there is a distinction between the "prestige" and "property" aspects of stratified school knowledge. That is, the components of

knowledge may be stratified on the basis of some presumed, logical connection and also upon the basis of the public esteem which possession of the knowledge confers upon its possessor. In the formally organized school, knowledge which attracts the greatest prestige has the following characteristics:

> *literacy*, or an emphasis on written as opposed to oral presentation; *individualism* (or avoidance of group-work or cooperativeness) which focuses on how academic work is assessed and is a characteristic to both the 'process' of knowing and the way the 'product' is presented; *abstractness* of the knowledge and its structuring and compartmentalizing independently of the knowledge of the learner; finally, and linked to the former, is what I have called the unrelatedness of academic curricula, which refers to the extent to which they are 'at odds' with daily life and common experiences.[11]

The continuing demand for literacy and "correctly written" communications is common enough to make Young's comment pertinent to most schools — bureaucratized or not.

The relationships between "correctly written communications" and bureaucratic needs is fairly obvious and is discussed elsewhere. At this stage we may recall Weber's[12] typifications of the "ideal type" of bureaucracy in which the existence of written official files played an important part. In a phenomenological analysis of a "bureaucracy," the existence of documents remains one immutable and necessary feature. Communications that are purely verbal or performatory cannot be filed and retrieved for later reference; the continuing structure of the bureaucracy depends upon the availability of such "knowledge" at the times and places appropriate for organizational needs, i.e. maintenance of student records and report cards.

Justification for increasing emphasis upon reading and writing in elementary school is often based upon their usefulness in a bureaucratized social world. Individual teachers may occasionally speak of the liberalizing influence that literacy may confer (as does Freire in *Education for Critical Consciousness*)[13] but this consideration is not always paramount. Despite the frontier tradition of valuing action more highly than words, the written word maintains its prestige in formally organized schools. The medium, however, is not the entire message; the content of communication is also important. Does the need for preserving the structure of the formal organization place any constraints upon the contents of communcations whether written or veral?

The resolution of this problem must take into consideration such influences as the relative position of the speaker or writer in the hierarchy, the context of the utterance, and the degree of formality present in the situation. Children in lower grades are not expected to comment adversely, if at all, upon policy decisions made by administrators. Generally, children confirm this expectation in that they do not seriously question (say) the arbitrary divisions of school time into terms, weeks, days, or periods; also, even though they may not like a particular teacher, they do not usually assume the right to choose another; nor do they assume the right to select subject areas. This does not mean that children do not voice dissent or even opposition — even a seven-year old can exclaim, "Oh, no! Not Dick and Dora again!" — but it does suggest that major policy decisions are considered to be the inalienable prerogative of teachers or administrators.

In formal classrooms the major topics recognized as suitable for discussion are those related to the official curriculum. Young children frequently introduce unofficial topics into classroom discussions and teachers usually respond by channeling the children's interests into areas that are officially approved. Among themselves, children also establish rules governing the appropriateness of discussion topics; favoured topics include the age, marital status, and personal idiosyncrasies of teachers and administrators. Likes and dislikes for certain subjects, curriculum topics, and textbooks

or even school itself are tolerated, even expected, by both children and teachers.

How do the restrictions placed upon what may and may not be discussed, the context in which discussions are considered appropriate, and the rules governing the use of circumlocutions concerning certain topics, influence the child's understanding of what is happening? An initial impression is that most children learn that the content and idiom employed in various forms of communications are subjected to rules that vary according to different situations: most children learn that they are expected to adopt different modes of speech when addressing teachers, parents, other adults or peers, and that the rules vary according to the participant's position in a vaguely defined hierarchy of authority. Although the rules, and their variations, are usually well known, they are not always followed; this gives rise to various forms of "discipline" problems in which the legitimacy of the teacher's officially defined authority is apparently under challenge.

If an individual student does not conform to rules based upon the presumed necessity of maintaining status differences between child and teacher, then the student is often diagnosed as suffering from some disability — "culturally deprived," "disadvantaged," "underprivileged," and so on.

Pupils at the higher levels of the elementary school are usually familiar with the stratification phenomenon. That is, they believe that certain people are repositories of certain types of "knowledge" by virtue of their position in a hierarchy; for example, a grade-six pupil, already knowing the difference between a teacher and a principal, may believe that the principal has knowledge and authority in a domain distinctively different to that of the teachers.

Whatever a child knows is usually defined as not as important or as relevant as what a teacher knows. Teachers are usually the sole arbiters in the classroom of what constitutes relevant, important, or appropriate knowledge. If a child's knowledge contradicts that of the teacher, then the teacher's "knowledge" is held superior unless the topic is clearly not of institutional concern; that is, not part of the official curriculum. Keddie[14] describes an episode in which a teacher was able to impose her concept and definition of "family" upon a class of children although at least one child in the group found the teacher's concept contrasted with his own experiences. Such episodes are repeated many times daily in many different classrooms but largely go unrecorded.

Exceptional cases of a child achieving recognition as an authority by some outside body are occasionally found. The teacher's knowledge is generally conceded as more general and hence the teacher can acknowledge ignorance in a specific area yet remain an authority on other matters. This authority to legitimate "knowledge" for its validity is usually the prerogative of the teacher; if this prerogative is not exercised then legitimation is usually conferred by another authority such as a textbook, encyclopedia, or another teacher. The legitimation of what shall count as "knowledge" in the classroom is rarely random and usually governed by an implicit set of rules that incorporate the notion of status, hierarchy, and authority.

The authority relationship between new teachers and senior teachers, or between teachers and administrators also has an influence on the definition of what passes for knowledge in any classroom. Although most teachers are aware of the distinction between being "in authority" and being "an authority," the difference is not always acknowledged in social relationships. Teachers are often referred to as "colleagues" with a suggestion of peer equality, but there are few bureaucratic schools where a true collegiate atmosphere persists, especially as it pertains to the legitimization of knowledge.

For teachers in school, knowledge is not ranked in importance on the usual criteria of elegance, rigour, or profundity, but rather on its immediate application to areas

recognized as legitimate by the official curriculum. Hence what shall pass for "knowledge" in the classroom is often indirectly determined by officially approved textbooks, curriculum guides, the various committees which establish school policy, and the traditions of the school. The institution of the school, together with its supporting network of textbook publishers and curriculum committees, tends to legitimize certain types of "knowledge" as more important, more relevant, or of greater concern than others.

We may summarize this section on stratification by suggesting that knowledge is often perceived as existing independently of the person *qua* person but rather as an attribute of a role. Put another way, certain types of knowledge are commonly believed to be intimately linked with identifiable functions in the organization so that the stock of knowledge at hand for any individual is dependent upon his status in the hierarchy. This is the reverse of the common legitimating ideology that suggests that individuals achieve higher status by virtue of their superior knowledge.

Sequentiality

Although school "knowledge" may be categorized according to the social status of its possessor, there are other important considerations. An important case is sequencing according to some presumed logical or psychological considerations. The logical basis of sequencing is often discernible in elementary school grades where, for example, curriculum designers believe that it makes sense to teach subtraction before division. The logical dependence of the process of division upon the prior process of subtraction is easily demonstrated in simple number theory. By extrapolation, curriculum designers tend to place the simple and easy before the complex and difficult in any learning sequence. This is not always easy because many operations, simple to perform, are nonetheless difficult to explain; additionally, the logical and psychological are not easily separable. For example, a child of, say, three years can easily understand that one apple yields two halves on the first cut; the principle of division is easily explained this way — even though it includes fractions and makes no mention of subtraction — but many children and some adults find explaining its logical basis, in mathematical terms, quite difficult.

Attempts to develop fully programmed learning sequences based upon logical considerations alone have largely proved abortive (cf. Roe),[15] partly because of this distinction between the logic of explanation and the psychology of understanding. Despite these objections, most teachers presume that certain types of knowledge need to be acquired before others.

Although there may be rational ground for the sequential treatment of many curriculum areas, these are rarely explained to, or understood by, the child. From the child's-eye point of view, some things are taught in lower grades and others taught in higher grades — why this should be is not often thought problematic. Some children identify sequentiality with stratification by explaining the two phenomena in the following terms:

> We learn easy stuff like reading and writing at elementary school so that we can learn hard stuff like history and science in high school; that is why the teachers in high schools have to be smarter than the teachers in elementary school who are mostly women anyway.
>
> (anonymous child approximately eight years old — transcription only approximate)

Children who graduate from traditional and formal upper grades of elementary school to more progressive high schools may often find the work easier:

> High school english is easy — you can write whatever you feel like and you don't have to worry so much about things like spelling, punctuation and grammar — your spozed to be creative — see!
>
> (another anonymous informant aged about 14 years)

On the other hand, the teacher sees the challenge of being creative as more demanding than meeting the purely formal rules of grammar:

> Anyone can follow a set of prescribed rules provided that they are stated clearly enough; I think that it is much more difficult to express one's own personality with imagination and flair.
>
> (teacher at the same school as previous 14-year-old)

This teacher's concept of sequentiality assumed that difficult and challenging material should be placed after the simpler.

The student in this situation is placed in the position of having to reconcile the notion that high school is "harder" than elementary, with his own experience that some of it is easier.

A student whose experiences are the opposite, graduating from a creative or spontaneous elementary school to a more formal regulation bound high school would have little difficulty in explaining the situation. Everybody knows that high school is supposed to be more "difficult", but "difficulty" here is not defined in terms of required greater effort in response to greater intellectual challenge, but in terms of the necessity to conform to rules, regulations, and routines that often appear purely arbitrary, or at least a consequence of organizational needs.

For many children, classroom experiences in high school are not startlingly different from elementary school — but there are important differences. Most high schools are departmentalized whereas most elementary schools are not; hence, a typical high school student contacts several teachers in one day whereas in elementary school his or her activities are directed by one or two teachers. This provides little help in accounting for the remarkably uniform pattern of curriculum knowledge. An explanation for this phenomenon must be found elsewhere than the needs, expectations or anticipations of the children themselves.

Some explanation is provided by W.W. Charter who suggests that many of these longitudinal contingencies "are more matters of traditional assumption than evident fact."[16] He finds that the presumed need of co-ordinating the work-flow of many children and teachers in a large organization creates its own imperatives. Hence:

> The predominant criterion in public education for deciding whether or not a pupil is ready to move on, is a *time-of-exposure* criterion, which holds that if a pupil has been exposed to a set of instructional events for a given length of time he is ready.[17]

The imperative here is that the pupils must be "moved on." Everyone in schools knows that children must "progress" and "to progress" one must move forward as time elapses. Whether the presumed progress is substantive, in the sense that the child has acquired greater mastery, is apparently of less importance than the organizational need for progress through grades. The grade-linked sequence of knowledge is organizationally useful as it enables the principal or teacher to chart the child's "progress."

Sequentiality implies the notions of change, time, and progress. Sequentiality may be related, in some obscure way, to the logical structure of knowledge and/or the

psychological development of children, but more importantly, it presupposes the existence of *order* and *permanence* in a reified social context. Even though the child, the teacher, and the area of enquiry may change, there is a relatively enduring framework, such as grades or years, through which the child must pass. Sequentiality thus creates *predictability* in that, after due time, the child will demonstrate "progress" through the grades. Each of these implied notions is maintained through ceremonial events marking the beginning of the school year, the end of the year, vacations, induction into new (higher) grades and the distribution of new texts and curriculum materials — the early ones labelled "simple," "introductory," "beginning" and the later ones "further," or "advanced." Some school texts are explicitly labelled "Grade Five: Social Studies," or "Grade Six Reader" as if to re-emphasize the connection between the sequence of learning and progress through the grades.

The selection process for school readers and other texts merits an extended enquiry in its own right. What assumptions are employed in the selection of such texts? On what basis does the relevant authority select some material as "suitable for Grade Five rather than Grade Six or high school"? But these are not the questions of central concern here; we are more concerned with the possibility that organizational imperatives impose unnecessary constraints upon the structure of knowledge as presented to children. Enough has been said to suggest that sequentiality is a response to an organizational problem as much as anything else, but typically, it is not thought of that way, and, very often, not thought of as a problem. Organizational imperatives often tend to be regarded as evident facts rather than problems to be resolved.

Predictability

In schools, the stock-of-knowledge at hand or what-everybody-knows is an integral part of the day-to-day running of the organization. If many individuals felt a need to reflect on such problems as "Just what is the official definition of a teacher, and what specific rights and duties does the office of teacher imply?" every time a teacher or principal issued a directive then some inefficiency would follow. The legitimacy of a teacher's or principal's authority is rarely questioned and, if it is, formal procedures for the resolution of such questions are usually available and put into operation — parent–teacher conferences, disciplinary committees and so on. Statements concerning a teacher's institutional duties and rights are occasionally subjected to careful examination, but the more common and typical ways by which a teacher defines the classroom situation and his or her own authority, are often accepted with neither comment nor objection. A teacher's authority is often maintained by conforming to predictable patterns of actions expected of teachers in formally organized schools. In other words, the teacher must know how to look, speak, and act like a teacher.

Teachers establish patterns of action which students can interpret as indicating appropriate responses on their part. The teacher who pauses in the doorway before entering a classroom may be indicating that the appropriate student response is to cease conversation and attend to curriculum materials. Our understanding of these situations is dependent upon the predictable nature of these actions and the people performing them. Our everyday recipe knowledge of schools enables us to predict that a teacher, as distinct from a student, will usually be older and possess authority supported by organizational policies. We can also predict that the teacher will be scheduled by "the administration" to be "in charge" of a class at certain times and in certain places — a teacher so placed is expected to be physically present (unless some unexpected circumstances arise), to enter the classroom via the doorway (rather than window or ceiling or even, Santa Claus fashion, down the chimney) and to

proceed to a position in the room plainly visible to all. The general pattern is for teachers to establish their physical presence in the room in such a way that they will not be mistaken for janitors, parents, or non-teachers inside the classroom.

The predictability of teachers' actions proceeds further: teachers are expected to say and do certain things in highly specific, almost stylized, ways. For example, teachers in classrooms talk about scientific facts, mathematical problems, books to be read, regulations to be observed and so on. Although these topics may be punctuated by remarks such as "good morning" or "have a nice day," the range of teacher-initiated talk in formal classrooms is usually restricted to topics legitimatized by curriculum guides. Hence teachers do not usually talk about how to break a law and get away with it, how to fiddle an income tax return, how to run a raffle, how to solicit for an immoral purpose, how to make Molotov cocktails, or how to frustrate the administration.

In recent times previously taboo topics have become legitimate concerns of teachers, hence sex education and drug education classes suggest that talking about drugs and sex will not immediately destroy the image of a teacher as a teacher. However, such topics are dealt with in a highly stylized manner. The teacher usually adopts an air of detached impartiality supporting customary social norms, without sounding moralistic. Although this approach may vary quite strikingly in private counselling sessions, the teacher's public image must be, predictably, that of a teacher.

The predictability of teachers' actions makes possible the sharing of meanings among participants of the classroom scene. Unless these patterns are established, pupils, teachers and administrators have no way by which they can make distinctions between what constitutes teaching and what doesn't, who is a teacher and who isn't, or in extreme cases, whether "this place" is a classroom or something else. Observation of overt behaviour does not, by itself, reveal the way in which such actions are understood by the students, because children, like all human beings, deal with the meanings of actions rather than actual observed behaviour. It is not the look on the teacher's face that counts most, it is more important to know whether that look means approval, disapproval, anger or whatever; these interpretations can be made only by sharing meanings. In practice, students learn to predict a teacher's future actions on the basis of his or her present appearances. This is important knowledge. A random assortment of individuals acting in unpredictable ways could hardly be described as a school — although we may have been to schools that often appeared that way. The fact that the school is formally organized, requires many individuals to perform their activities in predictable sequences.

Although unexpected events often occur in schools, they are in a sense predictable; most school administrators provide some tolerance in the system to ensure that unexpected events do not disrupt the overall pattern. In general, everybody in the school knows what actions are appropriate for children, teachers and administrators, in particular places and at particular times. The more bureaucratized a school becomes, the more routinized and predictable its activities.

Although predictability contributes greatly to efficiency, it also has the unintended consequence of de-problematizing large areas of activity which could sensibly be viewed as areas of further exploration or enquiry.

Communicability

In everyday life, communications are important for any activity involving more than one person. If we suspend for a moment our taken-for-granted assumption that schools necessarily involve more than one person then the importance of communication in

schools becomes highly problematic. Is a school always and necessarily a place where people meet or assemble? Let us explore this notion for a moment.

If we think of education as a process of self-formation involving the development of understanding, then we could also believe that a period of solitary existence in a desert was a genuine educational experience.* In this case the desert would have to be thought of as a school and communications between people would be neither possible nor necessary.

Although isolation and the absence of human communications are not incompatible with the notion of education, some exchanges between humans are necessary for the emergence of human consciousness, for we are very much social creatures. But in bureaucratized schools, communicative competency often seems reduced to mechanical techniques for reading and writing.

Reading and writing are sufficiently important for organizational needs to warrant greatest emphasis even to the exclusion of other considerations. If we are going to have schools that look more like factories or offices, than forests or wildernesses, then we are also going to have schools where technical competence in reading and writing are regarded as important. Not only are they useful for the efficient, orderly and predictable running of the larger society and its bureaucratic institutions, they are also essential to providing proofs of productive effort on the part of teachers and students.

In other formally organized institutions, improving communications often become matters of paramount concern. Major difficulties are often described as a "breakdown in communications" — although this is often used as a euphemism for those rare occasions when communication is close to perfect — "he hates me and I hate him." But misunderstandings do develop and these are often correctable through "improved communication." "Improved communication" in these circumstances, does not mean that the communicants are more spiritually united or more sensitive to the needs of the other; "improved communications" in this context means that the degree of interpretation left for individual determination has been reduced to a minimum. Put another way, "improved communications" suggests that the meaning derived from communicative acts are shared in an almost one-to-one correspondence between participants; in other words, the realms of meaning as intersubjectively understood are restricted to a common denominator.

Realms of meaning incorporated under definitions of the situation are closely linked to the structure of the organization itself. Habermas[18] advances the argument that "scenic understanding" (the way the situation is perceived and understood by its participants) is subjected to political pressures.

From the point of view of a member of a bureaucracy the "correct" wording and interpretation of any communication can assume utmost significance. The character of communication often reflects the character of the organization; in bureaucratic communication this is usually third person, passive, and impersonal; the phenomenon of "bureaucratese" is familiar to most inhabitants of advanced industrial societies. Sentences beginning "There is evidence to suggest that . . ." are favoured over the semantic equivalent "I believe that . . ." This choice of phrasing, especially if repeated many times, has several consequences.

First, the avoidance of the first person reduces the author to an anonymous functionary rather than a person expressing a point of view; this presents the reader with the impression that the statement or proposition following is not an opinion or value

*This is not a ridiculous proposition, as many religious communities have believed that special states of grace or enlightenment could be achieved by such means.

judgement but an expression of an "objective" fact; the reader may also assume that the author has made a considered judgement based on evaluating the relative merits of competing arguments.

Second, the author, now an anonymous, depersonalized, or "objective" consciousness, is apparently appealing to reason or evidence as the basis of his propositions; hence, to reject the subsequent proposition places the reader in the position of having to go against an imputed argument of logic and/or evidence. Third, the social and political reality of the situation is not brought to attention as it would be if the alternative phrasing "I, your superior in the hierarchy, believe that . . . and you are hereby commanded to act as if you believed likewise," were used. A communication phrased as a direct command would probably provoke resentment; hence, the impersonal phrasing tends to depoliticize what may be a highly political act.

Finally, authors who constantly use such expressions may no longer recognise that they are the active producers of the communication; they become the relatively passive media through which information or knowledge is organized, evaluated, and transmitted. The habitual mode of expression favoured in formal organizations tends to constantly re-assert a separation between the producer of the knowledge and the knowledge itself.

An interesting aspect of communications in formal organizations is the frequent resort to statistics and mathematical expressions. There are many possible explanations of this phenomenon, but here I shall discuss the influence the presentation of "knowledge" in this form has upon the recipient.

From the wealth of tabulated data available from various statistical bureaus throughout the world, we might be forgiven for assuming the emergence of a new species of human consciousness — *Homo numero*, a mutant variation of *Homo Ludens* — a species whose greatest delight is to play with masses of tables, schedules, charts, diagrams, and statistical summaries. Our assumption would be wrong, for there are few people in the world who find personal satisfaction or enjoyment in poring over the output of computers and other data processing (or is it generating?) machinery.

The sheer volume, together with the complexity and variety, of statistical data confronts the ordinary human with an intimidatory and incomprehensible prospect: why then are statistical data so commonly found in the output of formal organizations?

The reason, I suspect, is partly because they tend to overwhelm, intimidate or mystify the reader. As C. Northcote Parkinson[19] observed, problems whose magnitude exceeds the scale of human imagination tend to be examined less carefully than problems that are within human compass. In less exaggerated terms, a recipient of a data-rich interdepartmental communique is less likely to critically examine the data, the conclusions and the recommended action if he feels overwhelmed by the data itself. In some bureaucratized schools the collection of test results is augmented by statistical treatment to provide a stronger impression of "scientific" validity. This subsequent treatment can never improve upon weak or misleading original data.

The invocation of statistics often only intensifies the impression of impartiality, impersonality and superior authority. Subsequent actions are no longer directed by human considerations such as likes or dislikes, respect, fear, anger and so on, but on the apparent basis of "logical conclusions derived from relevant statistical evidence."

Familiarity with the use of data and statistical treatments tends to enhance the prestige and/or authority of an incumbent of administrative office; the inability to comprehend or interpret them constitutes a disadvantage for administrators in organizations where their use is prevalent. Technical competence in quantitative procedure often becomes a major factor in sustaining the mystique of high office.

Statistics, then, can also be viewed as an instrument for maintaining distinctions between the status of official position as much as a means of ensuring clarity and logical rigor.

The systematic distortion of communications through the maintenance of social divisions has been described by Habermas.[20] Reduced to bare essentials, Habermas argues that the meaning of all forms of communication is determined not only by the vocabulary and grammar in which the communication is phrased but also by the definition of the situation as intersubjectively understood by its participants; where one partner in the communicative act possesses superior power to impose his/her set of meanings then the communication will be distorted; where maintaining a hierarchy of authority is an overriding consideration, the distortion will be systematic.

The systematic distortion of communication is often found in bureaucratized schools — what the teachers say is usually defined as more important, relevant, meaningful or significant than what a child says; what a principal, in his capacity of principal, says is similarly regarded as a better informed statement of the situation as it "really" is. Sometimes the situation is defined by assumption and implication rather than by explicit statement — for example, a principal may claim that "most students in our school work hard and perform well on standardized tests of achievement for their respective grades"; a teacher whose personal experience does not match that of the principal may deny the "official" definition and think, "What the principal is saying might be true for the school, but it certainly isn't for my class — I seem to have been loaded with all the remedial and slow learning cases." Although the teacher may reject the primary message, he may still accept the secondary (implied) messages; that the school is one where "hard work" is valued; that "performance" and "achievement" are closely related; that "objective measurement" on standardized tests is a valid way of measuring educational achievement; that there is an "objective" reality of "grades" and achievement/performance levels appropriate for those grades; that children can be rightfully expected to "perform"at an "achievement level" appropriate for that grade; that children who do not "perform" at their respective "achievement level" are less worthy members of the school.

What may appear at first sight to be a simple boasting by a principal turns out, on close analysis, to be a complex statement which many different aspects of the social reality of the school are unilaterally defined. The principal's (implied) definition of the school situation is likely to be internalized by the teachers and pupils as *the* reality to which their consiousness must conform. As such statements by principals are rarely challenged, the highly problematic nature of the issues being raised and the answers being provided, will pass unnoticed. Similar statements such as "we work as a team in this school" may be analyzed in the same manner.

Summarizing this section on communication: communication is important at every stage of the educative process; the format and content of communication within educational institutions is influenced by the structure of the formal organization itself; this influence is towards reducing ambiguity and increasing conformity in the intersubjective realms of meaning. In practice, these tendencies are accentuated or confirmed by the prior existence of hierarchical social relationships; consequently, communications in schools are often distorted in that unnecessary reservations are placed upon the discussion of propositions, and the possible ways of interpreting the reality of any given situation may be unilaterally and restrictively defined.

Objectified

Among Weber's typifications of the ideal type of bureaucracy, impersonality featured

quite prominently. The selection of new recruits into the various government bureaus on the impersonal criterion of success at examinations rather than knowing the right people was, and is, a feature of bureaucracies that most people find desirable. The use of the Chinese examination system in the selection of bureaucrats for the British-Indian civil service in the 1840's eliminated much of the gross incompetence that the previous system of patronage had permitted; it also stimulated the growth of the English public school system.[21]

The selection of recruits on such impersonal grounds required that the "knowledge" they displayed at examination, could not be a purely personal possession but must exist in objective form. For example, the applicant whose major "knowledge" was personal acquaintance with an influential Lord would have rated very highly under the earlier but now discredited system; but the candidate demonstrating knowledge of, say, Euclid's theorems could be judged impartially and impersonally as the "better" candidate. It did not really matter to the British Indian Civil Service that Euclidean geometry had little to do with the problems of administering a complex colonial empire; success at examination indicated that the "superior" candidate would work at routine or tedious tasks, for prolonged periods of time under someone else's direction.

Government departments in other countries followed the example and soon examinations or tests became the sole selection device for many employing organizations.

Gradually, many of the various tests and examinations (with the notable exception of the I.Q. test) came to bear a closer resemblance to the knowledge required for the actual job. The case of I.Q. testing warrants further discussion. Binet devised the I.Q. test in order to satisfy another demand of a bureaucratic society; he sought a reliable way of placing children into various categories such as: "suitable for an ordinary school," "suitable for a school with special teachers," and "not suitable for school." At first sight, it appeared that the French bureaucracy was responding to the needs of children, but from another perspective the children were being sorted according to the needs of a bureaucratized society.

The objectification of knowledge serves further bureaucratic purposes apart from selection of candidates. In the course of time the new recruit will demonstrate willingness or otherwise to do the job required; let us presume that he or she is either transferred, promoted, or dismissed; in which case, the position becomes vacant and a new person is to be appointed. The replacement of one person with another would not be possible if it was commonly believed that what a person knows is exclusively his or her property. To make humans interchangeable it is necessary to objectify their knowledge so that another person can learn it sufficiently well for organizational purposes.

If what a teacher "knows" was considered his or her uniquely personal posession then there could be no question substituting one teacher for another. But, under a bureaucratized school system, once a teacher leaves, he or she can, and is, replaced within a few days. Of course we recognize that no two teachers are ever quite the same in appearance, mannerisms and idiosyncrasies; but these are institutionally defined as irrelevant to the job as teacher. The question the employer asks is whether or not the new teacher has substantially the same stock of knowledge as the one being replaced. This would not be possible unless knowledge could be objectified and written down in textbooks, curriculum guides or school policy handbooks. The bureaucratic definition of teaching implies that knowledge can be transmitted from one person to another; hence, whatever is transmitted cannot be the exclusive possession of the individuals concerned.

The argument, that knowledge is (or ought to be) independent of its possessor, and undistorted by his values, prejudices or other idiosyncrasies, can also be explained

in terms of response to the needs of formal organizations. Gouldner[22] has argued that the frequent political disputes among German professors in 19th century educational institutions was resolved only by the creation of a socially useful construct — "objective knowledge," or at least knowledge that was free of the value judgements of the warring professors. In the natural sciences, the myth became fully reified so that some philosophers of science such as the positivists argued that "objective knowledge" is not a product of political expediency but has an independent existence.

If "knowledge" was truly objective, to the extent that any subjective influences would invalidate it as "knowledge," then phenomena of the type described here would be impossible; the common experience of many people in schools, that *who* makes a knowledge claim and the *social context* in which it is made is often as important as the content of the claim, suggests that "objective knowledge" may, at best, be an unattainable ideal. Critical theorists (Wellmer,[23] Horkheimer,[24] Habermas,[25] Meuller,[26] and Schroyer[27]) argue that, in respect of the social sciences, it is not even an ideal; rather it is mischievous or misleading in that belief in the impersonal origins of knowledge obscures the very important political processes that influence the generation of all "knowledge." The importance of subjective influences in knowledge production does not prevent us from treating it as objective knowledge in its subsequent transmission.

Whatever passes for knowledge must, at one time, have the personal possession of a human being who intended, created, or devised that knowledge as a consequence of his interests, intentions, or purposes. In the formally organized school, the agency of the knowing subject in the knowledge constituting process is often suppressed or ignored.

Concretization versus Abstraction

Bureaucratized schools tend to maintain a status distinction between knowledge expressed in concrete terms and knowledge in abstract or generalized principles. This status distinction is supported by the Piagetian school of bio-psychology[28] that argues that a child's cognitive processes undergo a sequence of development in which concrete operations invariably precede formal or abstract operations. Hence, knowledge expressed or developed through concrete experiences is thought to be less mature, and less developed than knowledge expressed or developed through abstract and formalized principles.

There are serious difficulties in ascertaining the validity of the Piagetian position. A major assumption in Piaget's argument is that human understanding develops through a describable sequence in which concrete operations invariably precede formal operations. In support of this contention, the Piagetians have produced empirical tests showing, or appearing to show, that the stages of cognitive development follow the pattern suggested. However, the empirical tests employed can only confirm rather than refute the existence of any particular cognitive stage. The tests reveal only what the tests themselves define as "formal" operations.

Piaget's theoretical position aside, the practical wisdom of many teachers suggests that children learn more readily and with greater motivation if provided with concrete objects to manipulate rather than through memorizing generalized principles. But if this is true of children's learning it is probably also true of adults. Even for adults, learning a practical skill such as bicycle riding, can only be done through the concrete experience. Stating the principles of locomotion and stability with respect to bicycles is more likely to distract than help.

The same argument holds for many practical skills even those as sophisticated as brain surgery and electronic engineering. Hence, there are no good grounds for arguing that learning through concrete experience is any less valid or important than learning through general principles. The peculiar advantage of generalized statements is that they can cover a wide range of particular events; for example, Newton's universal Law of Gravity covers apples, oranges, bananas, and ballistic missiles. Knowing that the law of gravity is universally applicable, greatly economizes the time we need to spend in applying it to practical situations.

When natural or social laws are stated in general terms the informed reader needs to know what categories of objects and events are covered by the law. In natural laws these are usually self-evident; in the case of gravity, all objects possessing positive mass in a vacuum are covered.*

In socially constructed laws, such as the laws of supply and demand, the appropriate categorization of objects and events is not self-evident. Are religious ikons and ceremonies subject to the laws of the market place? If they were, many true believers would turn atheist or agnostic overnight.

The allocation of objects and events into categories covered by socially constructed laws has become the prerogative of senior administrators in the policy-making levels of formally organized social institutions. Briefly, effective administrators establish the legitimacy of their role as definers both of general principles and the cases governed by those principles; this is essential to all policy making.

The higher status conferred upon formal operations is not necessarily a consequence of their greater heuristic power, nor even their association with adult forms of learning; rather, formal operations acquire higher status through their intimate connection with higher levels of bureaucratic organization. Put another way, stipulating general rules or policy making, is the province of upper level administrators; upper level administrators already possess higher status, therefore making statements in general terms is often thought of as a "superior intellectual skill."

Bureaucratic organizations tend to place a low premium on concrete experience and a high premium on abstract modes of thought; this serves organizationally useful purposes. In practice, concrete experiences are regarded as the province of low status personnel whilst abstract thought is the domain of the upper levels.

Summary

In this paper I have argued that knowledge within bureaucratized schools acquires characteristics adapted to organizational needs. These characteristics are not exclusively a consequence of demands imposed by the historical ways in which knowledge has been generated, nor are they an attempt to provide the psychological and social conditions most suited to the liberation of creative human powers; rather, they are equally a consequence of the presumed need to create and maintain an enduring and efficient bureaucratic structure.

The major demands placed upon the structure of knowledge by bureaucratized schools are: that the knowledge be divided into compartments or relatively discrete components; that the units of knowledge be ordered in sequence; that the knowledge be communicable from one person to another using conventional media of com-

*Interestingly, the mass of an object is usually defined in reference to the force it exerts within a gravitational field, which is a cyclic definition. The concepts of mass and gravity are not understood at a theoretical level.

munication; that success in acquisition of part, if not most, of the knowledge is recordable in quantified form; that the knowledge be objectified in the sense of having an existence independent of its human origins; that the knowledge is stratified into varying levels of status or prestige; that knowledge based upon concrete experience be treated as low status but that knowledge expressed in abstract and generalized principles be regarded as having high status.

Usually an overriding consideration in selecting, structuring, and presenting knowledge within bureaucratized schools is to facilitate the administration of the organization.

Knowledge as disseminated and sometimes generated by bureaucratized schools, is adapted to the cognitive style of bureaucratic consciousness. The salient features of this cognitive style are orderliness, componentiality, arbitrariness, predictability, explicit abstraction, moralized anonymity and passivity. The conditions under which learning is presumed to occur in bureaucratized schools favours the development of that form of consciousness which is peculiarly suited to social life in bureaucratized institutions. If pedagogic action within any bureaucratized school is at all effective, then a likely consequence of teaching is the habituation of some children to essentially bureaucratic forms of thought and awareness.

Bureaucratized knowledge is the product of a bureaucratized knowledge-generating or knowledge-distributing organization; it is also a product of those patterns of thought nourished and sustained by bureaucratic social structures. We should pause to reflect upon the possible consequences of compelling generations of children to attend institutions that are devoted to the dissemination of bureaucratized knowledge.

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Source: A. Wake, School knowledge and the structure of bureaucracy, Paper presented at the SAANZ Conference, Brisbane, 1978.

4 Knowledge utilization: epistemological and political assumptions

Donna H. Kerr

I. Introduction

In the social sciences, notable attention has been given to recasting scientific activity in light of criticisms of the prevailing *conception of knowledge*, including a notion of how knowledge grows. Witness, for example, the plethora of papers given to redescribing and understanding the scientific enterprise in "Kuhnian" terms (Kuhn, 1970). To a lesser degree, the social science literature addresses the role of *political theory* in the social sciences. By far, most such considerations have focused on Marxian theory, for Marx's political theory is explicit about the political purpose of knowledge: to enable us to take political action to change the world. While not wishing to deny the value of such views of the linkages between epistemology and political theory on one hand, and the social sciences on the other hand, I want to offer a broader, historical perspective on the connections between the social sciences and epistemological and political theory. In particular, I shall argue that both theory of knowledge and political theory are radically linked to the social sciences through the *concept of knowledge utilization*.

With some felicitous exceptions (e.g., Berger and Luckmann, 1966; Holzner and Marx, 1979; Machlup, 1962), the work in the social sciences on knowledge utilization has treated knowledge as if its nature were unproblematic.[1] Thus, the most common assumption is that the problem of knowledge utilization begins after knowledge is produced or created. The underlying belief is that if knowledge varies at all, it is only by category and not by conception. This belief must be rejected, for there is more than one conception of knowledge functioning in modern societies. Moreover, the utilization of knowledge commonly is taken as a technical (read: apolitical) problem, inasmuch as utilizing knowledge is presumed to be essentially an apolitical establishing of linkages between the point of knowledge production and the point of action. To the contrary, I wish to argue that what constitutes proper "knowledge utilization" depends upon one's conception of knowledge and one's theory of collective action, a type of political theory.

More specifically, the program of this article is to demonstrate that many of our various social institutions and practices are grounded in conceptions of knowledge utilization that are both inconsistent with one another and indefensible. In light of this finding, it shall make sense to recommend the kinds of changes in those institutions and practices that are necessary to conceptually and normatively successful knowledge utilization. To fulfill this program, we must address four component tasks. We shall need (1) to characterize social institutions in a way that will display their conceptions of knowledge utilization, i.e., their respective pairings of conceptions of knowledge and theories of collective action; (2) to show the faults of the respective conceptions of knowledge and attendant theories of collective action; (3) to propose a defensible conception of knowledge utilization; and (4) to recommend changes in our social institutions to ground them in this defensible conception of knowledge utilization. Clearly, to carry out these tasks in a thorough way would require a much more lengthy work.[2] But there is, I think, a somewhat truncated and largely metaphoric way to convey in this short article the basic points of the longer work.

First, I shall very briefly remind you of some history with which you are well acquainted: three conceptions of knowledge and their historically attendant theories of collective action. Second, I shall characterize three social institutions (namely, the bureaucratic organization of work, the professionalization of knowledge and services, and the dominant approach to policy research). The point of examining these institutions and practices shall be, as already noted, to uncover the respective

conceptions of knowledge utilization (that is, the conceptions of knowledge and theories of collective action as they conjoin in use). Third, I shall briefly discuss the components of a currently more defensible conception of knowledge utilization. Finally, I shall motivate the question toward which this inquiry leads: *How might our social institutions and practices be revised so as to reflect a currently more defensible conception of knowledge utilization?*

II. Three Conceptions of Knowledge Utilization

The Platonic Conception of Knowledge Utilization

Let us begin with Plato, not so that we begin at an historical beginning, but so that we might recognize the Platonic conception of knowledge utilization as it appears on the landscape of our current social institutions and practices. In this and the succeeding cases, for presenting the particular conception of knowledge utilization, it shall be helpful first to note the central features of the particular conception of knowledge, second to describe the theory of collective action, and then to make explicit the conception of knowledge utilization by combining these epistemic and political premises.

First, then, let us review Plato's conception of knowledge.[3] In the Platonic view, one can have knowledge only of Universals or Forms, and the way one has knowledge of these Forms (such as Truth, Beauty, and so forth) is by a direct, infallible intuition or an immediate grasping. The pertinent question, therefore, is not how one knows something (one just does), but what one has to go through in order to reach that state of mind that is called knowing. That preparation consists of a series of cognitive exercises, so to speak. One begins by perceiving images of visible (sensible) things, then proceeds to drawing what we might call commonsense inferences from those perceptions. After such practice in the world of appearances, some persons are able to advance to cognition of the intelligible world (as distinguished from the sensible world). The first such activity consists in reasoning from premises to conclusions, and the second is comprised of "seeing" connections between things so as to grasp the Form of things, where Forms are metaphysical entities. Only on this last level does the resulting state of mind count as knowing.

Next, let us turn to Plato's theory of collective action.[4] The Platonic view of what actions ought to be undertaken cooperatively and by

whom the decisions to take those actions should be made is based on a teleological understanding of how the parts of the human body function. The appropriateness of any action or decision about actions is, according to the metaphor, determined by the specialty of the particular population segment, much as the appropriateness of the behavior of any bodily organ is a function of what, in the organic specialization of things, that organ is supposed to be doing. Persons who let their bellies or hearts, instead of their heads, guide their behavior become ill or die or suffer other malfunctions of insubordination. In like fashion, the collective that allows the workers (the belly) or the spirited guardians (the heart) to decide actions for the collective, rather than leaving those decisions to the philosopher king (the head) acts unjustly—unjustly, for functional appropriateness is thus violated.

Given that only the philosopher kings possess knowledge and that only philosopher kings decide what action is appropriate to the collective, knowledge is assured a guiding role. In this way, knowledge (including knowledge of Goodness, what we might call moral values) is integrated into collective action. That is to say, the Platonic conception of knowledge and the Platonic theory of collective action mesh in such a way that there is no problem of a gap between knowledge and political values, on the one hand, and collective action on the other hand. In light of this "perfect mesh," we can identify three salient features of the Platonic conception of knowledge utilization. Knowledge utilization is unproblematic and "automatic" if only persons act in accord with their proper functions in the political order; and here it should be remembered that far from everyone is qualified to make decisions regarding knowledge utilization. Further, as knowledge is not empirically based, its proper utilization does not require that the system learn from its mistakes. Put otherwise, knowledge utilization does not admit of empirical assessment, but only of definition. If the experts, who know the Good as well as the True, in fact decide what actions should be taken, and if those actions are carried out, there is simply no point in looking for breakdown in knowledge utilization; such a breakdown *could not* occur. As well, *any* knowledge utilization is, by definition, just. The line of reasoning is as follows: those who make decisions possess knowledge, one thing that can be known is justice, and those who possess knowledge of justice cannot help but act justly. To summarize, given the proper political order, knowledge utilization is assured and complete. It is a definitional fact, as opposed to an empirical claim, that what is known is somehow translated into action.

The Aquinian Conception of Knowledge Utilization

Our interest in turning next to Thomas Aquinas is not expressly to accomplish some sort of historical review, but instead to identify a conception of knowledge utilization that is logically distinct from the Platonic version. And, as noted before, the point of this enterprise is to present conceptions of knowledge utilization, the likenesses of which appear in some of our current social institutions and practices. Insofar as these conceptions of knowledge utilization are systemically incompatible, we shall be able to see more clearly the inconsistencies between conceptions of knowledge utilization that are currently in use. It shall follow, then, that at least some of the current prevailing conceptions are faulty.

According to Aquinas, the root problem of the Platonic conception of knowledge is that it ignores the fact that our immaterial intellect is united with a body.[5] One comes to know not by an immediate grasping, but by having sensations or, to use Aquinas's term, phantasms, and by abstracting from those phantasms. Aquinas relegated Platonic knowing to the angels, those entities that alone can know the immaterial immediately, because they are immaterial. People, he reasoned, are capable of knowing only two things: material things via sensations, and immaterial things that can be generalized from those sensations. This is so because humans are themselves material (they have bodies) and immaterial (they have souls). Now the fact that people can know only material things and what they can reason from those material things means that on their own they are not qualified to know what is of utmost moral importance, i.e. divine law, which is entirely immaterial and so knowable only by the angellic intellect. Moreover, human knowledge can go awry at a number of points. Phantasmal errors (illusions and the like), misrememberings of phantasms, mistakes in combining and distinguishing, and wrong turns in if-then thinking all contribute to the fact that human knowledge is fallible. Thus, the knowledge on which humans can base their actions is not always coincidental with Truth, except for those cases in which humans receive knowledge via that nonphantasmal, nonreasoning route called divine revelation.

As well, Aquinas's theory of collective action differs markedly from that of Plato.[6] Given the error-proneness of human knowledge that must rely on phantasm and human reasoning, according to Aquinas the best that can be expected for collective action in this life is that we will "muddle through," to borrow a twentieth-century term. Aquinas's

theory of collective action begins with the premise that humans need and are suited for some sort of collective existence, for nature does not provide humans with built-in defenses or means of survival, and humans, having language, seem to need the presence of one another. Next, Aquinas notes that people cannot successfully carry on a collective existence beyond the family if there is more than one fount of laws and other directives. That is, stability is essential to collective life, and because that is so, collective action requires a strong sense of obedience and a strong central authority to whom that obeisance is paid. Of course, even the best central authority, being human, will make mistakes in reasoning up from experience, and so issue directives that are faulty on the knowledge criterion, i.e., directives that are at odds with divine reasoning. Nonetheless, it is better to remain obedient to a mistaken authority than to risk the dissolution of the political order that provides the structure for collective action.

What was unproblematic for Plato becomes problematic for Aquinas, for whom there are fewer epistemic guarantees. Knowledge utilization is possible in the Aquinian view only if there is a strong central authority, only if that authority reasons rightly up from perception, and only if the subjects are obedient. Notice particularly that in Plato's scheme, if one were to meet the knowledge qualifications to be the decision maker, that person's knowledge could not be fallible, nor could that knowledge fail to be brought to bear in deciding what should be done. In the Aquinian case, to the contrary, one could be qualified to rule and yet be capable of faulty opinion and thus fail to insure the utilization of knowledge. This difference between the two on the epistemic-fallibility issue might appear to have no particular political import when we consider that in both schemes it is a requirement that the dicta of those in the position of greatest authority be carried out. But striking differences separate the two. While for Plato obedience to the authority ensures knowledge utilization, it does not for Aquinas. Moreover, for Aquinas, obedience is more important than utilizing whatever opinion that would appear to represent the strongest knowledge claim. Aquinas's point is that unless we maintain order, no knowledge can be utilized; to challenge the correctness of the authority's decisions regarding what should be done in light of knowledge would be to risk destruction of the very order that the authority seeks to maintain--order without which chaos would reign, thus denying any collective utilization of knowledge by denying a collective life. So it is a practical matter for Aquinas: order with the attendant obedience comes first; a direct concern for knowledge utilization must come second.

The Hume/Mill Conception of Knowledge Utilization

The third conception of knowledge utilization that shall be useful to identify derives from two sources: David Hume and John Stuart Mill. Hume did considerable work on a conception of knowledge—work on which Mill grounded his own theory of collective action. But Hume did not himself address the full range of issues that one expects of a theory of collective action. Thus, there is good reason to pull together a conception of knowledge utilization that draws on Hume's conception of knowledge and Mill's theory of collective action.

Let us first review Hume's (1748) conception of knowledge. Though the Platonic conception of knowledge grants human intellect the possibility of knowing metaphysical entities directly while Aquinas does not, according to both Plato and Aquinas abstraction (or theory, as we might say today), plays a central role in knowledge. Hume, to the contrary, argues that the use of a priori reasoning (Plato's higher levels of cognition and Aquinas's discursive reasoning) to arrive at claims about matters of fact and existence creates nonsense or meaningless talk. For Hume, there are two distinctly different types of things that we can know, and we come to know them in distinctly different ways. *Either* we apply a priori reasoning (as we do in mathematics) and thus come to know and to know with certainty relations of ideas, *or* we arrive at probable knowledge by noting pairs of events that regularly conjoin (such as lightning and thunder or a sad feeling and tears). So, then, there exist no secret powers or metaphysical entities (e.g., Forms, Divine Reasoning, or, for that matter, causes) that we can know. If such do exist, they are forever hidden from us, in that human understanding is such that we can observe only events in time and space. When we say, then, that lightning *causes* thunder or that a sad feeling *causes* tears, we can strictly mean no more than that temporally the one event follows the other and they are roughly contiguous in space. With such a conception of empirical knowledge, the knowledge claims of one person are qualitatively equal to those of any other, providing that those persons' perceptual apparati and the conditions for their observations of the pairs of events are of equal quality. In brief, Humean knowledge, fallible and without metaphysicial or divine bound, grows atheoretically as an accumulation of "conjoining" statements, such as "sadness causes (so to speak) tears."

Mill's theory of collective action pivots on the importance he places on our integrating truths or, one might say, valid knowledge claims into

our actions.[7] For example, the central argument he uses for why the promotion and free exchange of opinions should be encouraged is that there is some truth in every idea, but that that truth cannot be identified without being challenged by the experience of others. Repeatedly Mill suggests that the health of collective actions for the individual turns in large part on the quality of knowledge on which those actions are decided. But note that to this point the same could be said of the Platonic role of knowledge in collective action. The fundamental difference is that in drawing on a Humean conception of knowledge according to which all persons (for Mill, all civilized adults of sound mind) are competent to test beliefs with experience, Mill (1859) argues that individuals are the appropriate persons to make decisions regarding their own destinies. The use of the State, then, is to serve as "a central depository, an active circulator and diffuser, of the experience resulting from many trials. Its business is to enable each experimentalist to benefit by the experience of others, instead of tolerating no experiments but its own."

To understand the Hume/Mill conception of knowledge utilization, it is helpful to think of the knowledge-utilization question as one that arises when we ask: "What should be done?" In the Hume/Mill view, for knowledge to be generated so that it might be utilized, experimenters must engage in vigorous debate so that the Truth might emerge. If we allow whatever conclusions that critical exchange generates to count as knowledge, then we must ask what knowledge should be utilized and in what ways. In the Mill tradition, the response is that those individuals (single individuals or freely associating individuals) whose destinies are at stake should decide. By being able to tap a central depository for the results of investigations, the individuals or free associations of individuals can draw on the experiences of others without accepting others' prescriptions for action. In effect, knowledge utilization in the Hume/Mill conception is an individual affair. The reasoning is both empirical and normative. First, anyone can know things; no special competence is required. Second, it is more important that individuals be free to evaluate knowledge claims and to decide what should be done, than for individuals to heed as prescriptions the claims of "experts" and others who would argue that their knowledge is qualitatively better. After all, the stock of knowledge consists of no more than a pile of atheoretical conjoining statements that require no theoretical sophistication to comprehend. That is, there is *nothing*, save for not harming another,

that is more important than individuals' choosing their own courses of action. Nothing. Not even the utilization of knowledge.

III. Social Institutions and Practices

Those social institutions and practices that determine the shape and content of our collective lives are difficult to see for two reasons. First, they tend to have such staying power and to change so slowly that they can span decades, lifetimes, or even centuries. But our tendency is to see only those things in our environments that change relatively quickly. Second, generally institutions and practices, like traditions, are not commonly things that anyone designs and implements. In a fashion, they just come about and, like rivers, follow whatever course the topology allows. Our habit is to see as objects for our critiques those artifices that can be blamed on particular persons or courses of action. But no one and no specifiable actions set the course of social institutions and practices, our social rivers. Their courses, though, can be changed. So while in many contexts it may not occur to us to do a critique, to do so often makes good sense. Such I believe is the case when we are concerned with knowledge utilization. More particularly, no matter what conception of knowledge utilization we think defensible, those conceptions that inhere in our social institutions and practices are the ones that hold sway.

The purpose of this section is to view three social institutions and practices, respectively, with the lenses of the three conceptions of knowledge utilization we have just considered. For each institution or practice, we shall need a brief description. Care must be taken here to understand that the point of giving such descriptions is not to defend them against alternative descriptions one finds in the social science literature. Specifically, the respective descriptions of the bureaucratic organization of work, the professionalization of knowledge and services, and the dominant practices in policy research are not offered as incontestable. In fact, in sociology alone a substantial literature has grown around the question of just what constitutes a sound description of each of the three. As a philosopher, I shall be content if sociologists, for example, but acknowledge my descriptions as characterizations for which some of their colleagues argue. Our main agenda shall be, of

course, to see particular conceptions of knowledge utilization as inhering in social institutions and practices.

The Bureaucratic Organization of Work[8]

A "perfectly" bureaucratic organization of work has these four central features:

(1) Those toward the top of the organizational chart fully specify what is to be done and how it is to be done by those toward the bottom of the chart.
(2) Those who decide what is to be done are maximally removed from the conditions and effects of the prescribed actions;
(3) For all who work within the organization, their own internal political goals (for example, promotion, reduction of work demands, and the like) displace the functional goals of the organization (e.g., the delivery of social services or the auditing of tax returns);
(4) Pervasive rules both protect each member from "irregular" behavior of superiors and subordinates and deny all members, except of course those at the very top of the organization, the latitude that initiative requires.

If for heuristic purposes we assume that a major purpose of any form of organization of work is to define and to carry out tasks knowledgeably, then the principally Platonic epistemology of bureaucratically organized work becomes apparent: only the occupants of the top boxes on the chart are assumed to know what should be done, and their "knowledge" is not tainted with what might be learned on those lower levels of cognition where one deals with the sensible world, as do those in the lowest boxes who actually manufacture the goods or directly provide the services; further, the organization needs no mechanism to learn from its mistakes, for if it is functioning on directives of the top-box knowledge holders, its actions cannot help but be perfect. As well, the bureaucratic organization of work reflects a Platonic theory of collective action: members are functioning "justly" when they are doing their respective well-defined, assigned tasks; and the point of guarding the strict specialization of the various bureaus and job slots is to protect and maintain the health of the organism itself and not to pursue any aims external to the organization.

Like the Platonic order, the hierarchial system of bureaucratic decision-making assures that the "one best way" of doing things is prescribed and guaranteed its guiding role through standardization. The notion of knowledge utilization is taken as unproblematic in the sense

that if all within the hierarchy would only take those actions as prescribed from above, then the favored knowledge would be in fact utilized. While those functioning at the point of direct experience (i.e., at the point of production or delivery of services) might think that they have valuable insights, what they believe is not granted the authority of knowledge by the organizational structure and, as would be any opinion emanating from anyone but the philosopher king, must be ignored if not suppressed. Much as the Platonic conception of knowledge utilization gives highest political priority to knowledge utilization, where the concept of knowledge is fixed, so the bureaucratic conception of knowledge utilization gives top ranking to putting the "one best way" (authorized knowledge) into action, where the "one best way" is chiseled with standardization into the bureaucratic stone.

The Professionalization of Knowledge and Services[9]

When knowledge and services are "professionalized," as they have been in the case of medical care, it appears that we can count on three things:

(1) The profession will claim that it must have full authority to determine both the knowledge content of its own work and what constitutes appropriate application of its knowledge;
(2) The professionals will treat their lay clients as subservient, inasmuch as they, the clients, are expected to follow orders (e.g., "doctor's orders");
(3) The profession will insist upon having the authority to determine what claims to knowledge are legitimate and which claims to competence are bona fide.

The conception of knowledge on which professionalization is predicated appears to have the Aristotelian empirical bent of Aquinas's epistemology. Professional journals and reference works commonly report empirically provided "research findings" as a basis for counselling the use of particular treatments. But perhaps more clearly in the mode of Aquinas is the implicit theory of collective action. Much as Aquinas proposed that citizens ought to obey the ruler whether or not they think the ruler's edicts are right or good, so professionalization gives the clear impression that even though the professionals are fallible, the laity should obey orders given by those whom the profession certifies. Aquinas's theory of collective action requires that the ruler's

authority not be questioned and be given obeisance so that a structure for action might be maintained. Professionals, with perhaps less noble, though similar reasoning, require that the authority of the profession not be questioned and be given obeisance so that the structure within which the professionals work can be maintained.

The fundamental similarities between Aquinas's conception of knowledge utilization and that of the professionalization of knowledge and services are indeed striking. One hears echoes of Aquinas when professionals talk of the necessity of the professional order to any knowledge utilization whatsoever. Indeed, challenges to the profession's authority are sometimes characterized by the profession as invitations to the destruction of the very basis of all relevant knowledge and systematic inquiry.

Policy Research[10]

The cost and sophistication of policy research logically can range from asking for a show of hands on the basis of which policy decisions will be made (e.g., to determine what the office coffee policy shall be) to elaborate, well-financed, well-staffed research programs, such as the federally funded New Jersey-Pennsylvania Negative Income Tax Experiment. Whatever its magnitude and complexity, what distinguishes policy research is its emphasis on "actionable" or "malleable" variables. The principal idea is to identify independent variables both that are predictively powerful and that can be controlled in social programs. In other words, the researchers' responsibility is to inform policy makers of what actions render what results; policy makers must, then, decide whether to use the levers that the researchers have discovered. And, to complicate matters, policy researchers commonly disagree about what actions get what results.

Policy research's implicit conception of knowledge is strikingly Humean: theoretical understanding is abandoned in favor of identifying pairs of events that regularly conjoin, so that the policy maker can then be told what particular events, if made to happen, will "cause" other events to occur. And, to a degree, the implied theory of collective action comes directly from Mill's *On Liberty*. Experimenters populate the landscape, differ on what conjoins with what, challenge each others' procedures for data collection and the like and, for all the freedom of speech and for all the contesting, are presumed to improve the quality of their knowledge claims.

The Hume/Mill conception of knowledge utilization shows through at several points in the production and use of policy research. First, cordoned off as "applied" rather than "basic," policy research is accorded a theory-free status. As an atheoretical enterprise, the policy-relevant knowledge is understood to grow cumulatively. When there are competing claims (such as, "laetrile inhibits cancer" and "laetrile does not inhibit cancer"), one of the claims is considered to be true and the other false; the generation of the false claim is attributed to faulty methodology.

Second, when official agencies hold hearings to decide a course of action, they typically invite researchers to testify as to what action will bring about their hoped-for result. When the researchers disagree, the officials either seek more such scientific testimony on the assumption that in the resulting debate the truth will show itself or entirely dismiss the researchers' claims because those claims conflict. The reasoning goes thus: either one event causes another or it does not; if there is a dispute over which is true, and if research is genuine or bona fide, the answer will emerge; if the answer does not emerge, then all "scientific" claims are suspect, for the point of research is indeed to render truths that are useful to choosers, to individuals as shapers of our own destinies. Moreover, in the Hume/Mill tradition, both policy researchers and policy makers, the "consumers," assume that no special theoretical sophistication is required to understand the results of policy research, for policy researchers, being free of "basic" research's theoretical thrust, can (nay, must) express their findings strictly as statements of conjoinings. One event or thing does or does not conjoin with ("cause") another. Or, from the policy maker's perspective, something is or is not a tool for effecting particular results.

IV. Toward Revising Institutionalized Conceptions of Knowledge Utilization

To this point we have noted that at least three different conceptions of knowledge utilization inhere in our action structures, our social institutions and practices. Unfortunately, the underlying epistemic pluralism is no virtue; when faced with different conceptions of knowledge, which one we choose *does* matter epistemologically. Moreover, our professed political values can hardly be effective when it is not our

preferred values, but those of other theories of collective action, that are ingrained in our action structures. (Here I must beg my readers to fill in their own grounds for accepting the claims that epistemic pluralism and political pluralism, respectively, are not virtuous. The development of arguments in support of these claims exceeds the space available.) Thus, we arrive at the focal question: How might our social institutions and practices be revised so as to reflect a currently more defensible conception of knowledge utilization?

To answer this question, first we need to construct a conception of knowledge utilization that derives from epistemology's most sophisticated conception of knowledge and from the most defensible theory of collective action. Just what conception of knowledge is most sophisticated is, of course, the central issue that drives epistemology. Quite clearly it would be foolish to claim that even the currently dominant model in epistemology constitutes, in any sense, the "final conception." Our interest here need only be to supersede the presently institutionalized conceptions of knowledge to the extent we can today. As well, this is no place to attempt a ground-up argument for some set of political values. So instead, let us severely limit our task. Here it shall be helpful to follow an if-then line of reasoning. *If* we accept liberal political values, *then* here we need only to present liberal theory of collective action as it has been modified to correct its weaknesses in Mill's formulation. From this more sophisticated conception of knowledge and this improved liberal theory of collective action, we can sketch the general features of a more defensible conception of knowledge utilization.

Answering the question of how our social institutions and practices might be revised requires more than a supersedant conception of knowledge utilization. Clearly, a complete answer also requires that we understand social institutions sufficiently well to be able to see specifically what institutional arrangements would employ the preferred conception of knowledge utilization. For this second part of the answer, I defer to the social scientist, and myself can and should offer only a most general characterization of the nature of considerations that the social scientist should bear in mind.

The Lakatosian Conception of Knowledge

Historically, between the Humean conception of knowledge and that of Imre Lakatos (1970), there appeared at least four fundamentally different conceptions of knowledge. Our task here is not to review the

criticism that prompted the development of each. For our purposes here it shall be sufficient to describe the Lakatosian conception against the background of the Humean conception.

For Lakatos, as for Hume, observation statements are rendered true or false by experience, whether such experience occurs naturally or through experimentation. But unlike Hume, Lakatos does not regard the growth of knowledge simply as an accumulation of such statements. Instead, knowledge develops as the elaboration and competitive testing of theories. If proceeding scientifically, researchers do their work *through* proposing and trying out theories. In particular, with a theory they try to predict novel facts, to explain the successes of the competing theory or theories, and to corroborate the excess empirical content of their theory. When they succeed on these three criteria, they have rational grounds for accepting their guiding theory over competing ones. Thus, knowledge grows through competitions between research programs, not via Humean accretion; and there are rational means for choosing the winner, contrary to Kuhn's (1970) claims regarding the extra-rational nature of "scientific revolutions."

The Revised Liberal Theory of Collective Action

Recall that the two central premises of Mill's theory of collective action are, in order of priority, that individuals should choose for themselves in matters that regard their own destinies and, second, that they choose best for themselves when they base their choices on true knowledge, which Mill argues arises naturally from the free exchange of ideas where all persons can participate. Now while there have been numerous developments in liberal theory beyond Mill, in liberal theory of collective action in particular, the central change pivots on one issue: the formulation of opinions amongst which individuals have the right to make a choice. Mill's theory, which casts the collective good as no more than the sum of individual goods, does not or, more to the point, cannot address the question of who should determine the options.

A number of political theorists and moral philosophers who have addressed the issue of the origin of the options point to the importance of a concept of community to defensible liberal theory. The reasoning proceeds roughly as follows: (1) whatever rational, self-interested persons would choose for themselves would contribute to their development and enjoyment of their own capacities and abilities (Rawls, 1971); (2) just which capacities and abilities are worth developing and the

exercise of which capacities and abilities is enjoyable depend in a crucial way upon others in the community of which one is a part (Wolff, 1968); (3) the options, among which individuals are free to choose, should be in the community or public interest or at least not against it;[11] and (4) what is in the community or public interest should be formulated by individuals as members of the community (White, 1973), rather than being left to determination by the economic elite, as turned out to be the case in free-market, party-controlled liberalism (Macpherson, 1977). This is to say, while individuals should still be free to choose in matters that regard their own destinies, the range of individual choice should be limited by a conception of community. Further, where issues regard what is in the community interest, the choices that are to appear on the ballot should be decided by the community, rather than being decided by an elite group.

Questions for the Social Scientist

The Lakatosian conception of knowledge and the revised liberal theory of collective action combine to form a more defensible conception of knowledge utilization, as its epistemic and political premises are more defensible. According to this Lakatosian/revised-liberal conception, all persons are *not* equally competent to understand, much less to judge, knowledge claims. In fact, only those who have some considerable theoretical sophistication can appreciate the force of even the simplest observational statement. Yet, all persons still have a right not only to make choices that affect their destinies, but also to participate as members of the community (1) in setting the boundaries within which they must choose, and (2) in deciding the slate from which they as individuals must chose when registering preferences for collective actions. How might policy research, for example, be revised to acknowledge the theoretical content that is basic to the growth of any knowledge whatsoever, including knowledge generated expressly to inform policy-making? Further, given that the knowledge produced by policy research must at least be understood outside the scientific community if it is to be utilized, how might practices in reporting the findings of policy research be revised so as to increase their comprehensibility to the theoretically unsophisticated?

A second feature of the Lakatosian/revised-liberal conception of knowledge utilization regards the role and range of acceptability of

perceived error. In scientific endeavors an error in prediction does not necessarily indicate erroneous theory. For example, the failure to observe some predicted social phenomenon does not necessarily challenge the research-guiding theory. Instead, it may indicate that additional factors are at play. To mistake one or even several predictive failures for a theory falsification would be to misunderstand the scientific enterprise and thus to risk abandoning programs of policy research on the wrong bases. What changes in the conditions and conduct of policy research might help us avoid this "false falsification" problem? Might we not need to consider, for example, longer term funding of research programs (note here that I say "programs" rather than single-shot projects) in order that those programs could themselves become well enough established to allow for the development of theory that might then be compared with other theories in rational competition?

A third feature of the Lakatosian/revised-liberal conception challenges the authoritarian aspects of professionalism both on epistemic and political grounds. First the epistemic challenge: Chaos in professional knowledge production, contrary to a common professional claim, would not need to be the result of abandoning the profession's strangle-hold on certified knowledge. We have rational criteria to decide knowledge disputes. Now the political grounds: Though not all persons are equally competent to judge knowledge claims, individuals do have the right to make their own choices over the full range of decisions that affect themselves. The superordinate attitude of professionals toward laypersons must thus be faulted on a political basis. What might be done, our revised conception of knowledge utilization would have us ask, to reduce the authoritarian, haughty stance of professionals?

With regard to the bureaucratic organization of work, the Lakatosian/revised-liberal conception of knowledge utilization offers two especially interesting questions. First, if we treat work itself as a scientific activity, it makes good sense to ask how work might be organized so that workers could make adjustments in their activities in response to predictive failures. If in fact bureaucracy cannot learn from its errors, we should ask just what kind of organization can. Second, if a sense of community is essential to individuals' developing and enjoying their capacities and abilities, we should also ask, how might work be revamped so as to enhance a feeling of community? (Notice that the point in asking this question here is not to seek ways to increase productivity.) That is, what

institutional arrangements would discourage workers from building protective cocoons around themselves with goal displacement and, at the same time, provide common rallying points? Or, to take another approach that may seem somehow heretical, how might work be reorganized to subordinate considerations of knowledge utilization to concern with the development of a sense of community?

Until we can answer these and a host of like questions about these and other social institutions and practices, our collective attempts at knowledgeable actions will continue to be shaped by now indefensible conceptions of knowledge utilization. Until then, we shall be plagued by epistemic and political dissonance - dissonance created by the gap between (1) our best understanding of the nature of knowledge and our professed political values, and (2) what our social institutions and practices encourage.

Notes

1. For an overview of the sort of studies that generally regard knowledge utilization, see Havelock (1972).

2. With a Spencer Fellowship grant from the National Academy of Education, I am presently working on this far longer manuscript which should be ready for publication in 1981.

3. This explication draws principally on the epistemology that Plato presents in the *Republic*.

4. The metaphor on which Plato's theory of collective action is built appears in the *Republic* and the *Timaeus*.

5. For a good selection on epistemology from *Summa Theologica*, see Bourke (1960).

6. For an excellent, accessible selection of Aquinas's theory of collective action, see Bigoniari, 1953.

7. One can identify more than one theory of collective action in John Stuart Mill's work. This explication is based on his *On Liberty* (1859).

8. This description draws heavily, though not exclusively, from Crozier (1964).

9. For this summary, I have borrowed from Freidson (1970), especially Part IV, "Consulting Professions in a Free Society."

10. For similar, more extended characterizations of policy research, see Etzioni (1971), and Scott and Shore (1974).

11. Wolff develops an argument to support his contention that social values, e.g., the public good or interest, consist of more than a sum of individual interests and are not antithetical to the basic principles of liberalism.

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5 Scientific management and critical theory in educational administration

P. E. Watkins

Introduction

It would seem from recent studies by Gronn (1982) that the concept of scientific management is still a powerful force in educational administration.

This paper examines how educational administration became essentially a technique of control through the transfer of scientific management practices and ideologies from industrial management to school management. It argues, with Gronn, that the influence of scientific management is still the dominant force in the administration of schools; but that such an influence presents organisational problems as technical problems and ignores the power relationship, class structure and legitimating ideologies around which organisations are structured.

This paper consequently argues that the practice of educational administration should be directed towards an emancipatory interest rather than used as a technique of control. To achieve this it is suggested that a critical social practice would help to demystify the dominant social structures, processes and ideologies.

Scientific management

Although Frederick Winslow Taylor did not formulate the term 'scientific management', which was originally put forward by Louis Brandeis during a railroad dispute, it has become unquestionably identified with him. In administration literature the terms 'Taylorism' and 'scientific management' have become synonymous.

The system of management which Taylor eventually arrived at developed during the industrial unrest at Midvale Steel. It was based on the assumption that people will realise what is best for them economically and act accordingly. As Taylor argued:

> What the workmen want from their employers beyond anything else is *high wages* and what employers want from their workmen most of all is *low labour cost* of manufacture . . . the existence or absence of these two elements forms the best index to either good or bad management.
>
> (Taylor, 1972a:93)

So that this rational behaviour could eventuate Taylor proposed four types of new duties which he called the 'principles of scientific management'.

- The first of these principles may be called the development of a science of work.
- The second is the scientific selection and then progressive development of the workmen.

- The third is the bringing of the science and the scientifically selected and trained workmen together.
- The fourth consists of an almost equal division of the actual work of the establishment between the workmen, on the one hand, and the management on the other hand.

(Taylor, 1972b:40–41)

Taylor advocated this 'one best way' of doing work, because he considered that workers were deliberately restricting the level of production required by management. Such behaviour while rational to the workers was irrational to management and their representatives like Taylor. So 'scientific management' was 'initiated' to squeeze a greater amount of actual production out of the employers' labour power or *potential* labour, thereby raising the rate of surplus value available to management. The solution of how to intensify the labour process was to change the organisation of work. For Taylor noted under prevailing conditions the workers controlled the work process. As he pointed out

> the underlying philosophy of all of the old systems of management in common use makes it imperative that each workman shall be left with the final responsibility for doing his job practically as he thinks best, with comparatively little help and advice from management.
>
> (Taylor, 1972a:25)

Thus for the structure of work to alter

> the management must take over and perform much of the work which is now left to the men; almost every act of the workman should be preceded by one or more preparatory acts of the management . . .
>
> (Taylor, 1972a:26)

Scientific management is concerned with management's point of view. It does not concern itself with the underlying reasons for the development of antagonistic social relations of work. It is concerned with the shaping and structuring of labour to the needs of capital. As Braverman (1974) states it is not so much a science of management as is commonly presented but rather 'a science of the management of other's work under capitalist conditions' (Braverman, 1974:90).

Braverman views Taylorism in terms of three major principles:

- the first principle is 'the *dissociation of the labor process from the skills of the workers* . . . Henceforth it is to depend not at all upon the abilities of workers, but entirely upon the practices of management' (1974:113)
- the second principle is *'the separation of conception from execution*, rather than its more common name of the separation of mental and manual labor . . . (the) 'science of work' is never to be developed by the worker always by management (Braverman, 1974:114)
- the third principle is presented as follows:

> If the first principle is the gathering and development of knowledge of labor processes and the second is the concentration of this knowledge as the exclusive province of management — together with its essential converse, the absence of such knowledge among the workers — then the third is the use of this monopoly over knowledge to control each step of the labor process and its mode of execution
>
> (Braverman, 1974:119)

With the implementation of these principles, power within the workplace shifted heavily towards management. In this process, work was increasingly fragmented, routinized and subjugated to management control. It entailed according to Drucker 'the analysis of work into its simplest elements and the systematic improvement of worker's performance of each of these elements' (1954:280).

But while Taylor explicitly stresses the economic rationality which will lead to employee acceptance of scientific management, implicit is the threat of coercion. He, himself, is perfectly aware that such changes will be resisted and contested so that workers will need to be either coerced or persuaded that they need to act 'rationally'. Thus the 'science of work' developed by management with its rules, fragmentation of work, and appropriation of worker knowledge must be imposed on the employees in the workforce. Consequently,

> it is only through *enforced* standardisation of methods, *enforced* adoption of the best implements and working conditions, and *enforced* co-operation that this faster work can be assured. And the duty of *enforcing* the adoption of standards and of *enforcing* this co-operation rests with management alone.
>
> (Taylor, 1972a:83)

Thus scientific management was based on the concept of control; control of knowledge; control of the work process and its evaluation; and control of motivation through economic gain. By such control Taylor's methods offered both the prospect of lower costs through increased efficiency and increased control of workers by management. This view influenced not only businessmen but also educational administrators who modelled themselves on their counterparts in industry. In addition, they saw an additional benefit — an increase in their status in society through the use of the 'vocabulary and techniques of industry' (Callahan, 1962). Through the use of these new methods of management, educators could avoid the criticism of inefficiency. By adopting the new panacea of scientific management, school administrators strove to emulate their business counterparts.

Taylorism today

Taylor's views not only have considerable historical importance but are also vital in obtaining a clear understanding of how and why industry today is organised. However, as administrators in the public sector seek to emulate their private industry counterparts and the patterns of the social relations of control in the public sector basically mirror the social relations of economic production found in private industry, then his views are also important in understanding the administration and organisation of educational systems. This importance has been stated quite clearly by Braverman.

> It is impossible to overestimate the importance of the scientific management movement in the shaping of the modern corporation and indeed all institutions in capitalist society which carry on labor processes. The popular notion that Taylorism has been 'superceded' by later schools of industrial psychology or 'human relations', that it 'failed' . . . because of Taylor's amateurish and naive views of human motivation or because it brought about a storm of labor opposition or because Taylor and various successors antagonized workers and sometimes management as well . . . or that it is 'outmoded' because certain Taylorian specifics like functional foremanship or his incentive-pay schemes have been discarded for more sophisticated methods; all these represent woeful misreading of the actual dynamics of the development of management.
>
> (Braverman, 1974:86)

The principles of Taylorism are still a powerful force in the administration of organisations in both the private and public sectors. Indeed, the fragmentation, division and deskilling of jobs is not only increasing in the private workplace (Zimbalist, 1979; Greenbaum, 1979; Kraft, 1978), but is also becoming evident in the educational system (Apple, 1981a; Giroux, 1981).

Research by Davis et. al. (1972) found that the principles of scientific management still decide how work will be structured, organised, and administered for the majority of members of most organisations. They found that

> Overwhelmingly influencing the design of industrial jobs is the criterion of minimizing, immediate cost of producing, i.e., the cost of performing the required operations. The usual indicator of achievement is minimum unit operation time. Designers of jobs see the criterion as being satisfied by the application of the following principles or guides for specifying job content:
> (a) the content of individual jobs is specified:
> (i) so as to achieve specialization of skill
> (ii) so as to minimize skill requirements
> (iii) so as to minimize learning time or operator training time.
> (b) Individual tasks are combined into specific jobs so that:
> (i) specialization is achieved whenever possible by limiting the number of tasks in a job and limiting the variations in tasks or jobs;
> (ii) the content of the job is as repetitive as possible;
> (iii) training time is minimized.
>
> (Davis et al., 1972:79)

They conclude by stating that, whatever the rhetoric of conventional schools of management studies, still

> current job design practices are consistent with the principles of rationalization or scientific management. They minimize the dependence of the organization on the individual. At the same time they minimize the contribution of the individual to the work of the organization.
>
> (Davis et al., 1972:80)

Scientific management design practices are also evident in recent research into the implementation of such new work processes as the word processor (Downing, 1980; Buchanan and Boddy, 1982). Buchanan and Boddy found that management decisions were aimed firstly to reduce the number of typists and typing costs; secondly the introduction of word processors would help to achieve that aim by creating jobs 'that are specialized, restricted, routine and boring' and thirdly managements' control would increase through the pooled and supervised typing services (1982:9–10). Thus most companies continue to design jobs in accordance with the orthodox principles of scientific management (Berggren, 1980).

But while there is deskilling there is also reskilling. While the majority of employees may be subject to increased control through the deskilling process a small number of employees are reskilled. However, their increased power due to this reskilling makes them subject to the next thrust in the search for complete control. As Zimbalist puts it

> mechanization and deskilling of work in one economic sector imply that new processes and techniques are evolving in another . . . sector. These new processes and techniques bring with them the demand for workers with new initially scarce skills. It is not until a later stage of their development that these new processes and techniques become themselves subjected to rationalization, job fragmentation and mechanization.
>
> (Zimbalist, 1979, p. xvi)

However, any reskilling that occurs concerns essentially different people, in a different place and at a different time.

The central drive in the scientific management movement was to reduce the worker to an unthinking appendage of the machine. This was to be achieved through the transfer of workshop knowledge to management. However, it not only affected the workplace but also the school system through the adoption of Taylor's philosophy of management, the instrumental production view of education and attempts to measure specific outcomes of the educational system. In this way, education was fragmented in the name of efficiency (Besag, 1981; Kliebard, 1975).

The influence of business management strategies in education

Throughout the last hundred years the dominant model on which the organisation and administration of schools has been based has been derived from corporate management. This has influenced the organisation of schools during the earlier social efficiency movement which developed in the post World War One period and the new social efficiency movement which has arisen in the 1970s.

Scientific management and the social efficiency movement

The basic ideology of this view of schooling is that students should be prepared to fit the demands of the existing reality of the workplace. Social efficiency educators proposed that schools should be organised to prepare students for their place in society so that national unity and order might be preserved.

Educators such as Sneddon, Bobbitt, Cubberly, Thorndike and Ellwood held the assumption that the general welfare of the community coincides with business manpower requirements. Thus as Callahan (1962) argues it was

> No wonder that schoolmen sought to emulate the efficiency of business and use whatever methods business has used to attain it; and no wonder that 'scientific management' appeared in the forefront of these methods. Its appearance, however, was an unhappy one for our educational system. For instead of approaching the study of administration through the social sciences, school administrators applied the 'science' of business-industrial management as they understood it.
>
> (Callahan, 1962:245)

These educators took Taylor's ideas and applied them to schools. The quest for efficiency was directed at both the management of schools, in which the transition of the superintendent of schools from an educator to a business manager took place (Kliebard, 1975), and the curriculum.

Bobbitt in particular was greatly influenced by Taylor. He also put forward four principles of scientific management. His first principle was to use all the plant all the available time. His second principle was to reduce the number of workers to a minimum by keeping each at the maximum of his work efficiency. His third principle involved the elimination of waste. Bobbit's fourth principle moved from efficiency in the workplace to efficiency in educational theory. A suitably administered school would

> work up the raw material into that finished product for which it is best adopted. Applied to education this means: Educate the individual according to his capa-

> bilities. This requires that the materials of the curriculum be sufficiently various to meet the needs of every class of individuals in the community; and the course of training and study be sufficiently flexible that the individual can be given just the things he needs.
>
> (in Kliebard, 1975:56)

Bobbit thus mirrored the principles of Taylor in both organising the school and also organising the products from the school. As such, the optimal role of students passing through such an educational institution is to adapt to a predetermined and preselected pattern of behaviour befitting their class (Franklin, 1976).

Sneddon also considered that social efficiency is the position in education that calls for the direct teaching of knowledge, attitudes and skills intended to shape the individual's predetermined social characteristics (see Drost, 1967). As Taylor had applied science to management in the quest for efficiency Sneddon also felt that educators could employ science to increase efficiency in education.

> The final and general thesis is this; all education is tending to become scientific, to become a field of applied science, as are already medicine, war, navigation, agriculture, metal working and the like. But efficiency of action in any field of applied science is possible only on the basis of clearly defined aims. Right methods and sound testing of results are practicable only as they are consciously and specifically based upon clearly defined and carefully tested aims. To prove itself capable of developing in accordance with scientific standards and principles, education must in all its phases formulate and study its new problems and aims.
>
> (Sneddon, 1916:187).

Over forty years later the drive towards a scientific approach toward education was still in evidence. For as Griffiths similarly argued:

> the administrator is an applier of science in much the same way as an engineer or doctor. There will always be some art in administration as there is in engineering or medicine; but the amount of art will decrease as the amount of available scientific information replaces administrative folklore.
>
> (Griffiths, 1959:24)

Ellwood in addition believed that an educational system based on rational, scientific principles was needed to control the individual. As the majority of students were to become followers or workers then the school should teach them to follow well, so making an efficient society. Ellwood argued that

> Systems of education have not been created for the training and development of individuals as such, but rather to fit the individual for membership in society, that is to control the process by which they acquire habits, so that they shall advantageously, co-ordinate their activities with those of their group.
>
> (in Franklin, 1976:309)

Central to this application of the ideology of science and scientific management to schooling was the factory metaphor of the school. This Kliebard (1975) argues is responsible for the process-product mode of rationality that still influences school systems at the present time. The organisational and curriculum models of schooling still reflect the ideology of industrial production.

Such technological models with their origin in industry, view students in industrial terms as raw materials to be molded into the finished products. As Cubberly argued

> Our schools are, in a sense, factories, in which the raw products (children) are to be shaped and fashioned into products to meet the various demands of life. The specifications for manufacturing come from the demands of twentieth-

> century civilization and it is the business of the school to build its pupils according to the specifications laid down. This demands good tools, specialised machinery, continuous measurement of production to see if it is according to specifications, the elimination of waste in manufacture and a large variety in the output.
>
> (in Kliebard, 1975:52)

From such a perspective the essential role of the student is the adoption of a predetermined and preselected pattern of behaviour (Apple, 1979). This pattern of behaviour is associated with a curriculum which is organised and administered to reflect what might be called managerial education. Here the curriculum is evaluated on its ability to meet the demands of the dominant economic institutions. This centrality of the curriculum to the school as a factory is pointed out by Bobbitt.

> If the school were a factory, the child the raw material, the ideal adult the finished product, the teacher an operative, the principal a foreman, then the curriculum could be thought of as whatever processing the raw material needs to change him into the finished product.
>
> (in Gallagher, 1980:5)

Similar to the basic ideology behind the new management strategies in the world of work, educationalists veiled the inequalities and class structure inherent in schooling under the rhetoric of science and technology.The dominant class's interests are ensured whilst being obscured and legitimated through the predominance of 'neutral' technological considerations. In this way the administration of educational structures and the curriculum becomes an instrument of social control. Control which ensures conformity and the maintenance of the status quo.

The new efficiency movement

In the 1970s and 1980s there has arisen the new efficiency movement or new cult of efficiency (Beare, 1982). This movement has been associated with the increasing economic crisis that most western countries find themselves in. To counter the effects of the crisis, the state and the educational system under its control has increasingly turned to corporate models of management as a means of solving the problem. As Apple puts it

> The current solution is to couple the tightening of control and accountability, reductions in spending, and closer ties between schools and industry on the one hand with the rhetoric of local control, parental choice and a 'free market' individualism on the other.
>
> (Apple, 1981:383)

Beare (1982) has outlined three factors which have been important in the re-emergence of the social efficiency movement. Firstly, private industry, due to inflation, has had decreasing profit margins which has caused a rationalisation of organisation and staffing. Job opportunities have been reduced allowing employers to be much more selective in recruiting staff.

Secondly, the government sector is also being affected by inflation, increased costs and financial cut-backs as governments seek to stimulate the private sector. Consequently, they seek to mirror the private sector by higher 'productivity' and 'efficiency'. Because education has a history of such an approach, literacy tests, numeracy tests, reading test scores, and examination marks are increasingly viewed as important indicators of 'productivity' and 'efficiency'.

Thirdly, the effects of inflation have produced a 'taxpayers' revolt'. With taxes increasing due to inflation, taxpayers simplistically compare education with the private

sector work they are accustomed to and call for comparable 'productivity' and 'efficiency'. In such a scenario education becomes purely instrumental with educational outcomes 'efficiently' matched to corporate needs.

Thus if we accept Braverman's proposition that while practices may differ the ideology of Taylorism still holds in the workplace and society generally, then such current calls for cost-effectiveness, core-curriculum, vocationalism, and increased efficiency in schools might be viewed more clearly. In current terms the ideology of the social efficiency movement can be exemplified by the Williams Report (1979). The argument is concerned with economic considerations and control achieved through the closer alignment of the school with corporatist practices. In this way, education might be more closely tied to the needs of capital while costs are cut through greater control accountability and the reduction of 'wasteful' expenditure. As Bates (1981) has argued the Williams Report is

> concerned primarily with the function of education in providing a trained workforce; with ensuring basic adequacy of performance in work-related skills; with stratifying the output of schools through nationally recognized tests, with the closer articulation of opportunity with higher education and training, and the resultant stratification; and with the integration of the hierarchy of educational opportunity with the hierarchy of occupational opportunity.
>
> (Bates, 1981:8)

Such a view of education in which control is increased while costs are reduced implies a social control mechanism in which the school is used as an instrument to rectify the imbalances and contradictions of the current recession. The school, in this sense, is seen as a regulating agency through which order and consensus in the existing economic structure might be engineered.

In particular, the main concern of many educational administrators is that of technical rationality which still reflects the positivistic interpretation of the act of administering. As Waldo (1978) points out the mutually supporting concepts which seem to ground the study of complex organizations 'include scientific rationality, effectiveness, efficiency and productivity' (1978:591).

This reflection of the new efficiency movement in educational administration has been termed by Gronn (1982) Neo-Taylorism. In a survey of eight recent studies of school administrators he found the prevalence of 'crude Tayloristic thinking'. This included a pre-occupation with seeking 'the one best method, and with a concern for efficiency'. He concludes by indicating that the studies

> have reverted back to, or updated, primitive motion and time measurement techniques pioneered by F.W. Taylor and his associates. Whether these early forays are preludes to more sophisticated sets of appraisal techniques leading to the formulation of 'effort standards' and competencies for principals is not yet clear, suffice it to say that signs are there in embryo.
>
> (Gronn, 1982:19)

The question might be asked, as this paper has indicated, as to whether Taylor's methods have ever been discarded? While the initial crude practices may have fallen into disrepute the basic ideological force of efficiency through science and technology has held sway and continues to hold sway, in fact with increasing emphasis.

Scientific management as ideology

It becomes important at this point to distinguish between scientific management as *practice* and scientific management as *ideology*. For as a complete process of man-

agement practice the ideas were rarely put into practice. When it was, it was largely implemented by small non-unionised firms. In the larger unionised firms it was fiercely contested by the employees. Yet much was learnt from these initial attempts. While daily instruction cards, extreme time and motion studies and differential piecework were abandoned a number of ideological underpinnings endured. Firstly was the quest by management for control over the special knowledge of production. Secondly, was the implementation of defined, adequate standards of performance. Thirdly, management itself was put under management control.

These facets of scientific management were no longer industrial or political problems of the developing economic order, but instead were put forward as problems of science and technology. These are subject to expert knowledge and skill, and are dealt with without favouritism or emotion in a neutrality which will ensure the best technical solution. 'Efficiency' became a 'scientific' matter and not one which reflected the dominant social relations of the workplace. Such an ideology masks the true relationship by appearing as a cohesive force through which both the dominant and dominated work to achieve technical solutions to their problems.

The importance of scientific management was that

> the application of science to the labor process led not only to the 'expansion of the forces of production' but simultaneously laid the basis of a new ideology in which the preservation of capitalist relations was presented as a technical matter to be removed from political discourse. The pursuit of 'efficiency' became the basis of a new ideology, a new form of domination. Rationality was turned on its head and became irrationality.
>
> (Burawoy, 1978:251)

Through this process the social relations of the workplace are obscured and any intervention in the labour process can be couched in scientific, technical terms thereby gaining legitimacy.

In this context, the development of scientific management and its inherent ideology converges with a major aspect of critical theory. This concerns the demystification of the role that science and technology play in our current society. Habermas (1971a) suggests that the increasing rationalisation of organisations is 'linked to the institutionalization of scientific and technical development [which] realizes not rationality as such but rather, in the name of rationality, a specific form of unacknowledged political domination' (1971a:81–82). Thus the legitimation system of advanced capitalism tends to revolve around technical and scientific problems. To this end the political system works to make whatever technical adjustments and scientific innovations are required in order to ensure the smooth functioning and perpetuation of the prevailing economic system.

Through this process, legitimation of power and the status quo are obtained under the 'mantle of modern science' with a strength more considerable than in the past. For as Habermas argues

> . . . today's dominant, rather glassy background ideology, which makes a fetish of science, is more irresistible and far-reaching than ideologies of the old type. For with the veiling of practical problems it not only justifies a particular class's interests in domination and represses another class's partial need for emancipation but affects the human race's emancipatory interest as such.
>
> (Habermas, 1971a:111)

The dominant ideology is one of technocratic consciousness by which dominant groups in society are legitimated through the reification of science and technological progress.

A critical theory of organisations would explain why one class dominates another; it would offer an interpretive account of actions and practices; it would provide *quasi-causal* accounts of the relationship between social structures and kinds of behaviour; it would offer an historical account of how individuals came to be what they are; it would provide an ideology-critique of how people came to accept repressive social practices; it would offer a theory of crises indicating at which period in time people would be willing to listen to the ideology-critique; it would explain through a theory of communication how people have developed false consciousness and how this can be avoided; it would provide an action plan to show people how to act and organise themselves differently (Habermas, 1971a, 1971b, 1974, 1975, 1979; Fay, 1977; Bates, 1982; Foster, 1982; Giroux, 1982; Denhardt, 1981b). Through such a critical theory of organisations and their administration much of what is accepted as 'rationality' would be unmasked. Structures of organisations, while often having disastrous human consequences, would not be viewed as neutral entities 'embodying inexorable and unavoidable and impartial constraints deriving from the basic processes of industrial-ization' (Salaman, 1979:29). Instead concepts such as 'efficiency' would become problematic. In whose interests is it? Who gains? Who loses by these new efficiency methods? Such a style of administration while not only assisting individuals would also help to democratise organisations. Such a development, Habermas argues, would be characterised by:

> a decreasing degree of repressiveness (which at the level of personality structure should increase average tolerance of ambiguity in the fact of role conflicts), a decreasing degree of *rigidity* (which should multiply the chances of an individually stable self-presentation in everyday interaction), and approximation to a type of behavioural control that would allow role distance and the flexible application of norms that while well-internalized, would be accessible to reflection.
>
> (Habermas, 1971a:119)

Through indulging in a critique of domination through science and technology, administrators may open up new horizons regarding how and why schools are organised. These may include a new clarity of communication between the administrator and the administered; a greater degree of choice rather than regulation; and a recognition of the need for increased reflection and purposeful action. For as Habermas sums up:

> Ideologies are . . . illusions that are outfitted with the power of common convictions . . . In systematically restricted communications, those involved form convictions subjectively free from constraint, convictions which are, however, illusionary. They thereby communicatively generate a power which as soon as it is institutionalized can also be used against them.
>
> (Habermas, 1977:22).

Ideology in this sense is more than the implanting of 'false' ideas, more subtly and powerfully it directs the attention of people into selected areas while shaping social relations on seemingly mutual good faith and promoting political relations of consent and acceptance.

The dominant ideology then is founded in the distorted communication which may exist within an organisation and in the expression of scientific management which helps to perpetuate this ideology.

Critical theory and educational administration

Critical theory in contrast to scientific management is concerned with emancipation

rather than control. However, the science and technology of control has been seen as central to educational administration. As Bates has put it

> educational administration is a technology of control. Specifically, it is a technology of control devoted to (i) the production and allocation of persons and (ii) the production and allocation of knowledge. Clearly, the process of schooling does not exhaust the social mechanisms by which control is exercised over people and knowledge, but it is probably the most ubiquitous and powerful process devoted to such control.
>
> (Bates, 1980:66)

Control is focused on the maintenance of the existing organisational pattern with the perpetuation of the prevailing power structures. In many cases the school administrator operates to maintain these structures and to maintain the existing legitimacy of the organisation within its social and economic environment by perpetuating the 'mystifications, myths and cover-ups' critical to the continuance of the existing organisation structure (Boyd and Crowson, 1981:345).

However, a critical theory approach to educational administration would concern itself with indicating how organisational power is developed, perpetuated and transformed rather than with superficial, technical and maintenance concerns. Thus organisational members would be offered an opportunity to develop a critical awareness and historical perspective of their organisation so that they may free themselves from the legimating ideologies which mask understanding and prevent change. In such an approach the structures of educational organisations, while often having questionable social and human consequences would not be viewed as 'neutral and inevitable' entities, but that

> they would be seen as historically constituted, humanly derived institutions, always subject to analysis and reformulation; individuals would be seen as active participants in the process of constructing and modifying these institutions.
>
> Denhardt, 1981a:73)

A critical theory of administration is concerned with social and political values which helps administrators to decide on the standards, interests and directions that the organisation should take. Thus the administrator should be concerned not with certainty but with possibilities. Goals and statements cannot be taken as 'givens' but as constraints within which the administrator works (Perrow, 1982). These should be viewed as everyday practical, political problems which have to be developed, reinterpreted, constantly re-evaluated and transformed. Consequently the organisation of teachers, students and parents to the various possibilities available is a central political activity of the educational administrator. But to facilitate the dialogue between the members of the organisation administrators have to ensure the adequacy, legitimacy and openness of the way they communicate.

Habermas (1979) has pointed to the contradiction that lies between the distorted and disabling communicative power of undemocratic organisations and the collective enabling power of democratic open criticism, understanding and collaborative consensus. The concept of distorted communications suggests that many organisations actually operate in this vein, veiling power, obscuring issues, manipulating trust and consent, twisting the available knowledge and limiting possibilities. Thus a central thrust of educational administrators should be to correct these unnecessary, disabling distortions, which often reflect the interests of the administrator and powerful interests, rather than those of all organisation members.

Ideal communications entail an all pervasive democratic interaction. Inequalities of power and status are openly debated and argued while the dominant, legitimating

beliefs, rationalities and ideologies are laid bare and continually criticised. For Habermas argues that through ideal communications, undistorted by unequal power and domination, emancipation leading to the well being of all members might be achieved. As Forester (1981) puts it

> 'Emancipation' must be intimately tied to practice overcoming those distortions of communications shaping our knowledge of one another, ourselves, our possibilities — including feasibilities and strategies. Working to spread responsibility, to foster possibilities of political criticism and discourse, to democratize in actuality, the critical practice of questioning practical possibilities of action links the vision of critique, yet to be embodied in the acts of questioning, to concrete everyday activities of emancipatory practice.
>
> (Forester, 1981:193)

For Habermas ideal communicative actions are social interactions co-ordinated through the co-operative achievements of understanding among the members of an organisation. In communicative action 'participants are not orientated primarily to their own success but to the realisation of an agreement which is the condition under which all participants in the interaction may pursue their own plans' (Habermas, 1982:264). Consequently all members of an organisation should have the opportunity to speak out and criticise the arguments of other members. In doing this they all should have an equal opportunity to make known their attitudes, feelings, intentions, interests and

Table 1 Administrative Distortions of Communication

	Norms of Pragmatic Communication			
Practical level	Comprehensibility	Sincerity	Legitimacy	Truth
Face to face	lack of sense, ambiguity, confusion	deceit, insincerity	meaning out of context	misinformation
Response	'What?'	'Can I trust him?'	'Is this right?'	'Is this true?'
Organisational (e.g., school administration pushing through curriculum changes)	parent and public exclusion by jargon	rhetorical reassurances; expression of false concern hiding motives	unresponsiveness; assertion of rationalisations; professional dominance	information withheld; responsibility obscured; needs misrepresented
Response	'What does this mean?'	'Can we trust the changes?'	'Is the change justified?'	'Is this true?'
Political-economic structure	mystification; complexity	misrepresentation of the public good	lack of accountability; legitimation by line not by active participation	policy possibilities obscured, withheld or misrepresented; ideology as private enterprise is always efficient
Response	'Do you think they understand what that means?'	'That's their line'	'Who are they to say?'	'What they never tell us about is ...'

adapted from Forester, 1980:280

motives while having equal rights to issue orders and require the justification of actions and decisions of others (Habermas, 1979). Thus the goal of critical theory is a life free from unnecessary domination in whatever form and which should be implicit in every act of communication. Individual emancipation is achieved through collaboration, sharing knowledge, reaching agreement through reciprocal understanding within a common accord and mutual trust.

In an interesting exercise which can be adapted to educational administration, Forester (1980) has tabulated how members of an organisation may experience distortions of communication. These distortions may come about through the violation of Habermas' (1979) four norms of 'universal pragmatics' or pragmatic guides and standards for practice. In administrative terms these would be: Is the administrator's communication *comprehensible*? Is the administrator's communication offered *sincerely*? Is the administrator's communication *legitimate*? and Is the administrator's communication *true*?

However, such distortions of communication can be rectified so that any forms of domination are removed and a non-coercive dialogue of communication develops where the welfare and interests of all participants is understood and recognised. Such an undistorted communication situation may develop by correcting any distortions as the following table suggests.

The implications inherent in the overcoming of any administrative distortions of communication are that educational administrators need not only technical administrative skills but also political and social skills demanded by the environmental pressures impinging on the organisation. Consequently, the educational administrator needs firstly, to combine and integrate technical skills with open, democratic participation; secondly, to use and develop community skills and resources rather than preempt them; thirdly, to harbour the growth and support of diverse interest groups who may incorporate a critical element into decision making processes and lastly, to be aware of the larger structural and social changes taking place at the international and national level which when manifest at the local, practical level may affect claims of legitimacy and truth. In this way a critical social theory of educational administration recognises that education organisations must be viewed not as mere technical systems but as settings where people engage in communicative interaction. However, freedom from domination, deception and manipulation will come from ideal or undistorted communication in organisations as true personal reflection and autonomous action develop when all distorted communications at both the individual and organisational level are corrected. For only then 'in self-reflection knowledge for the sake of knowledge attains congruence with the interest in autonomy and responsibility' (Habermas, 1971b:314).

Habermas conceives critical social theory as a way of achieving emancipation through critical self-reflection. Consequently, only in an emancipated society, whose members' autonomy and responsibility had been realised would communication have developed into a non-authoritarian and universally practised dialogue (1971b:314). Through perceiving and analysing distorted communication critical theory points the way to escape technocratic domination and control through the reinstitution of reason. Such a self-formative process is marked

> by stages of reflection through which the dogmatic character of surpassed forms of domination and ideologies are dispelled, the pressure of the institutional framework is sublimated; and communicative action is set free as communicative action. The goal of this development is thereby anticipated; the organisation of society linked to decision-making processes on the bases of discussion free from domination.
>
> (Habermas, 1971b:55).

Table 2 Overcoming Administrative Distortions of Communication

	Distortion Type			
Practical Level	Comprehensibility	Sincerity	Legitimacy	Truth
Face to face	revealing meaning	checking intentions	determining roles and contexts	checking evidence
Response	'What does that mean?'	'Is that meant?'	'I don't need to accept that ...'	'I'll check to see if this is really true.'
Organisational	minimising of jargon; involving parents, students and teachers in decision making committees	organising counter-advocates; checking with contacts, networks	making decisions participatory; involving all affected persons	utilising independent/ critical third party expertise
Response	'Clean up the language so people can understand it.'	'Check to see if this information is correct.'	'What is the position of the school council, regional board and union on this?'	'Check the data and interview responses to see if this position is really correct.'
Political-economic structure	demystification; counter-skills	exposing unexpressed interests	democratising the state; politicising planning	institutionalising debate, political criticism
Response	'In simple language all this means is that ...'	'Of course they want to implement this. Their power, empire and status increases if no one speaks up.'	'Without political pressure, the bureaucracy will continue to serve itself ...'	'Democratising inquiry; politicising administration. We have to show what can be done here.'

adapted from Forester, 1980:281

This section has examined how critical social theory might be related to the practice of educational administration. In particular, it has examined Habermas' contribution to this debate. From this position an attempt has been made to find a way of looking at educational administration and identifying any instances of domination, manipulation and deception as distorted communication by indicating their deviation from normal or undistorted communication and their consequent contradictions.

Conclusion

In Victoria the change of government in 1982 has marked a slight but significant shift away from a centralised management of top down control envisaged in the P.A. Report (Education Department of Victoria, 1981) to a bottom up democratic decision making structure embodied in Labor Party policy. The rejection of the P.A. Report meant also a rejection of the scientific management approach to educational administration. Concerns for efficiency, effectiveness and control embodied a distortion of

communications which reduced the power of parents, students and teachers and centralised it in the Minister. Consequently, the decision making processes were unequal, non-representative and subject to Ministerial jurisdiction.

In contrast the present Government has made a move toward an ideal communication structure. In this administrative structure educational organisations are seen as democratic not autocratic. Decision making consequently becomes collaborative and public with maximum participation, independent of direct Ministerial control and free of domination. This acknowledges that all members of the educational polity have a right to share in the formulation of decisions which may have a profound effect on them. Such a process may involve senior administrators viewing their position from a different perspective, where all participants have a genuine symmetry. Now, as Maddocks puts it

> the principal will be a facilitator and a mediator, expert in examining and clarifying issues, resolving problems through frank discussion with opposing parties, leading to negotiated decision-making on matters affecting the work of students, teachers, parents and members of council.
>
> (1982:4).

Thus ideal communication incorporating a democratic mode of decision-making should involve all interested parties especially those who are immediately going to be affected by any decisions. As these negotiations must necessarily involve frank and open discussion of the matters at hand, any decisions democratically arrived at must be accepted by all participants in the decision making process to ensure their satisfactory and speedy implementation.

This paper has examined the effects of scientific management on both subsequent management techniques and the administration of schools. It has argued that while certain practices have been discontinued, the ideology underpinning Taylorism still is *the* dominant force in administration today. Administrative practices are still considered in 'neutral', 'objective' terms requiring 'scientific' quantification for a technical solution.

Such processes have been earnestly taken up by educational administrators during the present poor economic circumstances. Educationalists have looked to increasing cost efficiency; accountability and staff rationalisation in an attempt to achieve the desired economic outcomes. For many the main quest is to tie education more closely to the practices and structures of the corporate sector regardless of the continuing stratification and inequalities that exist. For these are technical problems which ignore the power relationship, class structure and legitimating ideologies that form the covert mechanisms of organisations. Hopefully, such factors will replace considerations of efficiency and best methods in a critical social theory of organisations which perhaps incipiently has started to be implemented in Victoria.

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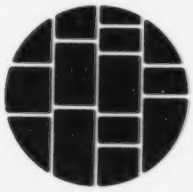

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ISBN 0 7300 0000 1 (Set. ESA841)